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Sustainable Development Unit

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Toward Sustainable Development:

An Investigation into Canadian Conservation Stategies

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TOWARDS SUSTAINABLE DEVELOPMENT:

AN INVESTIGATION INTO CANADIAN CONSERVATION STRATEGIES

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EXECUTIVE SUMMARY

The primary objective of this document is to examine the progress of Canadian governments in implementing environmental strategies which address the recommendations contained in the federal government's Report of the National Task Force on Environment and Economy, which was drafted in response to the 1987 Brundtland Report. The document is divided into two parts.

Part One provides a historical perspective on the development of our modern environmental consciousness. Subjects discussed include the impact of the Industrial Revolution, the growth of the North American Conservation Movement, and the modern contributions of Rachel Carson, the Club of Rome, the Stockholm Conference, Ernst Schumacher, James Lovelock, the World Conservation Strategy, Global 2000, and the Worldwatch Institute. The latter influences preceded the Brundtland Report of 1987, which acted as a catalyst for global action on the environment.

Part Two initially examines the federal response to the National Task Force Report, which entails the establishment of a National Round Table and the development of a National Conservation Strategy (The Green Plan) to be released during the fall of 1990. The progress of each province and territory is as follows:

Alberta -

At first glance, it would appear that this province has made significant gains towards producing a conservation strategy. However, it should be pointed out that the Public Advisory Groups to Environment Council of Alberta, a crown corporation has produced both the Prospectus [Revised, 1987], as well as a Draft Conservation Strategy [May 1989] rather than the government itself. The latter document will be incorporated into the province's Sustainable Development Strategy pending the formation of the Albertan Round Table. The Round Table will be responsible for developing both an Action Plan and determining the mechanism for the preparation of the province's Sustainable Development Strategy.

British Columbia -

The B.C. Round Table on Environment and Economy was formed in January of this year. It has been charged with the following mandate: to make recommendations for the development of the province's Sustainable Development strategy; to examine a mechanism to resolve land-use and other environmental-economy conflicts; to promote public awareness on environmental/economic issues; and to recommend the nature and structure of a Sustainable Development Institute. In order to facilitate this process, Task Force members were divided into four core groups in March. Each core group is presently developing a workplan, which will be submitted at the next meeting of the Round Table in June.

Manitoba -

The appointment of Manitoba's Round Table was announced by the Premier in October, 1988. In order to oversee the implementation of the National Task Force recommendations, the Round Table created an Executive Committee and seven sub-committees. Manitoba's Sustainable Development Strategy is considered a joint project between the Round Table and the Province. The Sustainable Development Strategy Sub-Committee is in the process of completing the framework or "Sustainable Development Core Strategy", which outlines the "beliefs, vision, fundamental principles and guidelines, process and component strategies". When combined, these elements will form the basis of a sustainable development strategy for Manitobans.

New Brunswick -

The Premier's Round Table on Environment and Economy was announced in August, 1988. The Round Table was charged with the task of determining the appropriate methodology and structure for the development of a conservation strategy. As a result, the Round Table has completed the first phase of their consultation program, which entailed holding a series of public meetings throughout New Brunswick during the months of November 1989 and January 1990. The Round Table also established in February of this year a series of 13 provincial conservation strategy "sectoral groups", representing a cross-section of the province's environmental and economic interests. Each sector group is responsible for submitting a report to the Round Table by September, which will culminate in the development of a draft sustainable development strategy for the province.

Newfoundland -

The Legislative Assembly of Newfoundland has made a commitment to produce a conservation strategy by 1992, however, no direction on its implementation has yet been decided. Composition of the province's Round Table members, funding, and terms of reference is currently pending approval of the Legislature.

North West Territories -

The formation of a Round Table for the NWT is not expected until the Fall of 1990, although a chairperson was appointed in March to comply with the recommendations of the National Task Force. A co-ordinated effort between three government ministries has resulted in the formation of a Sustainable Development Strategy for the territory. This document contains a sustainable development policy (now before cabinet) and an action plan.

Nova Scotia -

The province's Round Table was formed in October of 1988 "to encourage a new, proactive partnership involving the public and private sectors for the protection and enhancement of the environment". The Round Table's Conservation Strategy Committee (formed in March, 1990) is currently working with a consulting firm on developing a mission statement which reflects the direction of the provincial conservation strategy.

Ontario -

Like Alberta, the environmental initiatives of the Ontario Round Table (formed October 6, 1988) were preceded by the efforts of a non-profit association of major provincial conservation organizations. The Ontario government commissioned The Conservation Council of Ontario in 1985 to gauge the extent to which government programs and policies in six areas (i.e. agriculture, wildlife, forestry, land use conflicts, waste management, natural areas) adhered to the objectives of the World Conservation Strategy. The report of The Conservation Council, Towards a Conservation Strategy for Ontario was released in 1986. Since this time, the Conservation Council has taken it upon themselves to produce a framework for their own provincial sustainable development strategy. The Council intends to submit this document to the Round Table upon completion. As of May 14, 1990, Round Table members have been divided into an Outreach Program Committee, a Demonstrations Project Committee and a Sustainable Development Strategy Committee. The latter Committee is intending to establish six working groups which will produce a comprehensive report on the following sectors; agriculture, manufacturing, urban development, energy, forestry, and transportation.

Prince Edward Island -

This is the only province or territory which has actually implemented a provincial conservation strategy to date. A provincial Round Table was also formed to comply with the National Task Force recommendation in 1989, two years after the completion of their conservation strategy.

Quebec -

This province was the first to act on the recommendations of the National Task Force by announcing the formation of its Round Table in August 1988. Like other provincial Round Tables, this body will assist in the formulation of a provincial conservation strategy. An action plan to ensure the publicization, positive enhancement, and implementation of sustainable development initiatives is to be submitted to the Quebec Cabinet during 1990.

Saskatchewan -

The formation of the province's Round Table was announced by the Premier during March of 1989. One of the objectives of the Round Table is to produce a conservation strategy for the province by the end of 1991. In order to facilitate this process, a six member Round Table Conservation Strategy Committee (RTCSC) was formed and their first meeting was held in September of 1989. As the RTCSC members began to prepare the groundwork for the provincial conservation strategy, the need for a series of Advisory Groups became evident. Each of the eleven Advisory Groups is responsible for developing a comprehensive "stand-alone" report by the end of January 1991. By mid summer all of the advisory committee reports will be amalgamated by the RTCSC to produce a draft provincial conservation strategy. The final version will be submitted to cabinet for approval in November/December 1991.

Yukon -

Another jurisdiction well along the path to implementation is the Yukon, whose strategy is currently in print. The 14-member Yukon Council of Economy and Environment (similar to a Round Table) was established in October of 1989 to encourage environmentally sound economic development. The Yukon's Department of Renewable Resources has been actively pursuing such a strategy since 1985, and had already done considerable preparation toward a "Yukon Conservation Strategy". In addition, the Yukon Department of Renewable Resources is concurrently assisting in the preparation and development of several "northern" conservation strategies which involve all political jurisdictions in the Canadian Arctic. At the other end of the political scale, the Department of Renewable Resources is also actively involved in the preparation of a "local" conservation strategy for the northern Yukon community of Old Crow.

ACKNOWLEDGEMENTS

In February of this year, Resource Policy and Economics was created to provide expertise and support for the Department of Parks and Renewable Resources in areas of legislation, cabinet liaison, resource policy and economics, and sustainable development. In turn, the Sustainable Development Unit (within Resource Policy and Economics) was formed to develop expertise in and ensure the incorporation of sustainable development principles into the Department's resources management decisions. Presently, the Unit is comprised of two individuals, Lynda Langford (Supervisor) and Laura Lawton (Research Officer). In order to better guide the Department's involvement in sustainable development issues, and in particular, the Conservation Strategy, and to assist Department members on advisory groups of the Provincial Round Table, the need for a background discussion paper on this topic became apparent. Laura Lawton was assigned the task of researching and writing this document to promote a basic understanding of the concept within the Branch and the Department.

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LIST OF ABBREVIATIONS

ACS	Alberta Conservation Strategy
CCC	Co-ordinating Committee for Conservation
CCREM	Canadian Council of Resource and Environment Ministers
CHS	Centre for Human Settlements
DOE	Department of Environment
ECA	Environment Council of Alberta
ICC	Inuit Circumpolar Conference
IRCS	Inuit Regional Conservation Strategy
IUCN	International Union for the Conservation of Nature and Natural Resources
NGO	Non-Governmental Organization
NRTEE	National Round Table On The Environment And The Economy
PACs	Public Advisory Committees
RTCSC	Round Table Conservation Strategy Committee
TVA	Tennessee Valley Authority
UNEP	United Nations Environment Program
WCED	The World Commission On Environment and Development
WCS	World Conservation Strategy
WWF	World Wildlife Fund
YCS	Yukon Conservation Strategy

TOWARDS SUSTAINABLE DEVELOPMENT:
AN INVESTIGATION INTO CANADIAN CONSERVATION STRATEGIES

INTRODUCTION AND CONTEXT

In recent years, the condition of our environment has become a topic of growing concern for the public at large. Governments in Canada and other countries are responding to this concern by formulating strategies to ensure the maintenance, and in many cases the re-establishment, of a healthy and viable natural environment. Most governments now accept the theory that economic growth can only continue in the long term within the context of such an environment. Accordingly, this philosophy of "sustainable development" now constitutes the underlying basis of most conservation strategies. The main purpose of this document is to report on the progress of Canadian governments in implementing appropriate strategies and policies, particularly in response to the recommendations contained in the federal government's Report of the National Task Force on Environment and Economy, which emanated from the Brundtland Report of 1987.

This report is divided into two parts. Part One provides an essentially chronological historical perspective on the emergence of our contemporary environmental ethic. It does not purport to be inclusive, but rather attempts to point out major trends and milestones on the road to our present circumstances. Topics addressed include the ancient roots of the environmental dilemma, attitudes of pre-literate peoples, the impact of the Industrial Revolution, and the emergence of the North American Conservation Movement during the past century. More recently, the development of contemporary environmentalism is associated with such names as Carson, the Club of Rome, the Stockholm Conference, Schumacher, Lovelock, the World Conservation Strategy, Global 2000 and the Worldwatch Institute, each of which added some new dimension to its evolution. The growing environmental awareness of the 1970's and 1980's culminated in the Brundtland Report of 1987, which more than any other document acted as a catalyst for global action with respect to the health of our planet.

Part Two begins with an examination as to how Canada initially responded to the Brundtland Report. At the federal level, both a National Round Table and a Green Plan are being devised. Following a discussion of these initiatives, each province and territory is examined to determine their progress with respect to the establishment of provincial and territorial conservation and/or sustainable development strategies.

PART ONE

HISTORICAL PERSPECTIVES ON CONSERVATION AND SUSTAINABLE DEVELOPMENT

1.0 In the Beginning...

"Our land, compared with what it was, is like the skeleton of a body wasted by disease. The soft parts have vanished, and all that remains is the bare carcass." This lament, which could have been quoted from any contemporary ecologist, was actually sounded in the fourth century B.C. by the Greek philosopher Plato, who was mourning the deforestation and erosion of his native Attica (cited in Eckholm, 1976, 32). In similar vein, Mikesell (1969) argues that the famed Cedars of Lebanon, coveted by ancient shipbuilders and palace architects alike, were already severely depleted during biblical times. These examples illustrate the historical nature of our environmental dilemma, and remind us that modern man has no monopoly on the problem. Clearly, early hearths of civilization in the Mediterranean basin and eastern China experienced ecological crises long before the alarm bells were sounded in our own era. Environmentally-related problems have even contributed to the demise of entire civilizations. The decline of Mesopotamia four millennia ago, for example, has been associated with the salinization of alluvial soils attributed to unsound irrigation techniques (Eckholm, 1976, 114-18).

Subsequent generations apparently did not learn too many lessons from the ancients. Armed with the biblical license to "be fruitful, and multiply, and replenish the earth, and subdue it: and have dominion over the fish of the sea over the fowl of the air, and over every living thing that moveth upon the earth" (Genesis 1:28), Judeo-Christian cultures gradually brought most of Europe and the Americas under their control, and for the most part utilized the environment in ways which echoed the unsustainable practices of the ancient Greeks. One important distinction concerned the relative resilience of the temperate biomes in comparison to Mediterranean or tropical regions. Some semblance of a "natural state" ecosystem could be re-established in temperate mid-latitude areas (such as North America or Middle and Northern Europe) if given the opportunity to do so (Eckholm, 1976, 33). This no doubt helped to foster a sense of complacency as to nature's apparently infinite capacity to accommodate man's activities, however destructive. In any case, new frontiers were always available for settlement and exploitation, should established areas experience problems. While the dominant thread of Judeo-Christian philosophy thus emphasized man's "dominion" over a nature provided for his convenience, a second but much less visible thread stressed the virtue of "stewardship". One of its best known exponents, St. Francis of Assisi, preached in the

thirteenth century A.D. that all nature was part of God's Creation, and should therefore be treated with reverence and humility. His belief in harmonious co-existence between man and nature, although heeded in his time by very few, rates Francis as an early pioneer of the environmental movement (Dietrich, 1980, 3-5).

The environmental attitudes of the "civilized" peoples outlined above may be usefully contrasted with the perspectives of the so-called "primitive" or pre-literate societies. Although the situation should not be overly romanticized, it is fair to say that pre-literate peoples in general lived in harmony with nature, and saw themselves as an interdependent component of a natural world alive with life force and spiritual significance. This attitude allowed such societies to co-exist with nature for countless generations without disrupting the inherent integrity of their native habitats. It is ironic and sobering to contemplate that our own contemporary development of an environmental ethos merely imitates the "naive" or natural environmentalism of pre-literate societies. If a lesson is to be learnt, it is that contemporary aboriginal peoples could teach modern man a great deal about sustainable development.

1.2 Thomas Malthus and the Industrial Revolution

While environmental irresponsibility is revealed as a prevalent undercurrent in the history of civilization, the current global ecological crisis, with its unprecedented scale, traces its roots to the beginning of the Industrial Revolution in the mid-18th century. Beginning in England and spreading gradually to continental Europe, the United States, and other regions, the Industrial Revolution swept across the globe as the great "second wave" of fundamental economic change, the first wave being the "invention" of agriculture 8,000 years previously (Toffler, 1981). The impacts of this revolution included exponential population increases, large-scale rural-to-urban population transfers, increased technological sophistication, and of course, industrialization, with its concomitant consumption of resources and release of waste products on a scale never previously imagined. For example, it was only the adoption of coal technology for fuel which averted the mass destruction of Europe's woodlands during the early Industrial Revolution. However, the new innovation generated its own negative consequences in the form of atmospheric pollution and the global warming effect. On another level, the new technology enabled the human race to increase its population dramatically. Requiring all previous time to reach one billion (attained c. 1820), the second billion was achieved only 110 years later, and the third billion in 1960, after a mere 30 years (DeBlij, 1987, 216).

Given the nature of environmental change induced by the Industrial Revolution, it was inevitable that serious concerns and criticisms would be raised sooner or later. Prominent among the precursors of the environmental movement was the British economist Thomas Malthus (1766-1834), who in 1798 postulated the tendency of human populations to increase exponentially and thus eventually outpace the production of food and other necessary resources, which increased only arithmetically. Malthus thus recognized an inherent contradiction between unrestricted human population growth and a finite resource base, and predicted that the former would eventually be checked through famine, disease and war if left uncontrolled (Clark, 1986). However, excepting relatively local disasters such as the Irish potato famine of the 1840's, the experience of Europe throughout the nineteenth century and beyond was one of population growth and increased economic prosperity; it is not surprising therefore that Malthus was generally ignored. Interest in the Malthusian doctrine has resurfaced in our own era, although many advocates of the "technological fix" continue to assert that technology will always allow mankind to avert the worst-case scenario, whether by miracle grains or space colonization (see pp. 12 and 13).

1.3 The Conservation Movement; The Early Years

Other voices echoed the concerns of Malthus as the Industrial Revolution continued its progress. Benjamin Franklin observed during the late 18th century that woodland clearance in New England was proceeding at a rate which endangered the supply of lumber reserves essential to the new American republic. That he straddled the old (i.e. unlimited growth) and new (i.e. environmentalist) modes of thinking is reflected in his warning that "Whenever we attempt to amend the scheme of Providence, and to interfere with the government of the world we need to be very circumspect lest we do more harm than good" (Williams, 1986, 72). Within the academic community, the seminal work Man and Nature was published in 1864 by George Perkins Marsh, who "challenged the myth of unlimited resources which dominated American thought and action in his day and expounded the importance of man's role in changing the face of the earth" (Johnston et al., 1981, 51). Many people consider Marsh to be the founder of the modern conservation movement. "Conservation" has been defined by Passmore (1974) as "the saving of natural resources for later consumption"; as such, it is closely related to the concept of "sustainable development" which has been receiving much currency as of late (see p. 15). The emergence of the conservation movement is also usefully juxtaposed with the conflicting concept of "preservation", which Passmore (1974) takes to mean the saving of nature from mankind (perhaps in perpetuity). Preservationists tend to emphasize the inherent value of nature, and aver that it should be protected for its own sake, rather than for any potential benefit, save aesthetic, that it may have for humans. Tensions between conservationists and preservationists have characterized many subsequent environmental issues.

Conservation, as part of a total approach to the use of natural resources, was first introduced at the turn of this century by the policies of U.S. President Theodore Roosevelt and his chief forester Gifford Pinchot, who defined conservation as "the use of natural resources for the greatest good of the greatest number for the longest time" (Herfindahl, 1961, 1). Some years earlier, in 1891, the first American forest reserves were established under the jurisdiction of the Department of the Interior with the passage in Congress of the General Land Law Revision Act. These early reserves were opposed by lumber interests, stockmen and others, and those responsible for their establishment were not really aware as to how these lands would or should be managed. It was Pinchot who deserves credit for successfully demonstrating and promoting the science of sustained-yield management as a profitable alternative to conventional practices predicated on a "rape and pillage" attitude (Graham, 1971, 95). As a result of his success, the Division of Forestry was elevated to the status of a Bureau in 1901 (Coyle, 1957, 37). Between 1898 and 1905, Pinchot lobbied to have the U.S. forest reserves removed from the Department of the Interior's jurisdiction, and transferred to the Bureau of Forestry (in the Department of Agriculture) on the grounds of gross mismanagement (e.g. deforestation, environmental degradation). President Roosevelt signed the Transfers Act of 1905 authorizing the transfer of all forest reserves (renamed National Forests) to the Forest Service (Hays, 1959, 44). Thus the U.S. Forest Service was established out of necessity on the principle of sustained-yield management (Eckholm, 1976, 35-36). Although Pinchot also embraced the concept of multiple use, he stated that wildlife refuges, scenic beauty and recreation were secondary considerations compared to the utilitarian value of forest harvesting (Hays, 1959, 42). To this extent, Pinchot succeeded in alienating many preservationists.

With the national forests firmly under the control of the Forest Service, Pinchot realized that federal powers could also be used to promote policies which conserved all resources. Coyle (1957, 3) writes that Pinchot's idea to use "government powers to promote the wise management of all basic resources for the good of man was regarded as new and astonishing". This popularized philosophy of conservation inspired a widespread following and gave impetus to further like-minded legislation. For example, The Inland Waterways Commission appointed by Roosevelt in 1907 promoted the concept of multi-purpose river development. The Commission emphasized the connection between water supply and stream flow (e.g. flood control, land reclamation through irrigation and drainage, retention of forests to retard run-off) (Hays, 1959, 107-108). Near the end of Roosevelt's second term in office, he proposed and organized a World Conference on Conservation to be held at The Hague, Netherlands in 1909. Unfortunately, Roosevelt's successor, W. H. Taft, did not carry this plan to fruition and many years would pass before the first international conference on

conservation would be held (Coyle, 1957, 68). Among Roosevelt's most notable conservation achievements was the expansion of National Forests during his presidential terms (1901-1908) from 42,000,000 to 172,000,000 acres (Graham, 1971, 134).

The establishment of Yellowstone National Park by the U.S. government in 1872 represented one of the earliest official attempts to protect wild lands from development, and set the precedent for many hundreds of similar parks throughout the world. Favourable public attitudes toward the "romantic wild west" no doubt facilitated the passage through Congress of the Bill creating a 1.6 million acre "public park or pleasure ground for the benefit and enjoyment of the people" (Chubb, 1981, 25). The early history of the National Park system illustrates the ongoing conflict between the conservationists, led by Pinchot, and the preservationists, led by John Muir (founder the Sierra Club in 1892), who wanted to ban all forms of development and resource extraction from these lands (Graham, 1978, 98). One early battle in 1913 saw the flooding of the Hetch Hetchy Valley in Yosemite National Park to provide water for the San Francisco area. The opposition of the preservationists to this project proved to be well founded, as the environment of the Valley was irreparably despoiled by the reservoir, which did not even meet the criteria set out by most conservationists. Despite having lost this battle, the preservationists as a result won the war, as Congress was moved to establish the National Park Service in 1916. In doing so, Congress declared its purpose to preserve the Parks so that they would be left "unimpaired for the enjoyment of future generations"; no further dam construction has since been allowed in a U.S. National Park (Coyle, 1957, 92). At the risk of oversimplification, it could be said that the ethic of preservationism ultimately prevailed in the American National Park system, while the conservation movement dominated the National Forest system.

1.4 The Conservation Movement and the Great Depression

The Conservation movement was given unexpected impetus during the 1930's by the combined effects of the Great Depression, which created a large pool of unemployed labour, and the "Dustbowl" of the American and Canadian prairie region, which demonstrated the need for permanent conservation measures. The "New Deal" policies of newly-elected President Franklin Roosevelt emphasized the mass utilization of such surplus labour for the implementation of large public conservation projects. For example, the Civilian Conservation Corps was founded in 1933 by an act of Congress to relieve unemployment and furnish the personnel for many National Forest and soil conservation projects. Graham (1971, 263) states that between 1933 and 1942 an estimated "two and a half million Americans served in the program. They planted 3,000,000,000 trees, built 1,000,000 miles of roads and trails, ... and 100,000 bridges

and buildings." The Tennessee Valley Authority (TVA) set up in 1933 was an outstanding example of an attempt to apply the principles of soil conservation to a large region. In addition, the concept of reclamation of already degraded environment was promoted (Coyle, 1957, 180). The TVA represented the first full-scale demonstration project as originally conceived by the Inland Waterways Commission of 1907 (see p. 5). In Canada, similar policies provided transfer payments for construction projects within the Canadian National Parks. For example, Saskatchewan's portion of federal funds were utilized to improve road conditions and build recreational facilities within Prince Albert National Park (Bella, 1987, 175-176). Unemployment created by the Great Depression also stimulated the formation of the Saskatchewan Provincial Park system in 1931, following the transfer of the province's natural resources from federal to provincial jurisdiction the previous year (Jimao, 1989). Despite the many successes of the conservation and preservationist movements in the United States and Canada during the first half of the twentieth century, the dominant attitude of North American culture remained one rooted in the desirability of unbridled economic expansion kindled by the ruthless exploitation of the natural resource base. It is only in the second half of the century, as discussed in the next sections, that the environmental ethic begins to diffuse from the few voices to the society at large.

1.5 The Dawn of the Environmental Era

In the post-World War Two era, the environment has gradually moved to the centre stage of public awareness in the United States, Canada and the other industrialized countries. This explosion of interest has been sparked in part by a succession of provocative and highly publicized books after 1960 which lucidly described the growing environmental crisis fostered by the post-war industrial boom. Held in common among these books is the warning that catastrophe is inevitable if environmental attitudes are not soon adopted on a mass scale. As if by way of illustration, a concurrent series of major environmental disasters lent growing credence to environmentalists who at one time would have been dismissed as doom-sayers or charlatans. One of the earliest prophets of popular environmentalism was the American marine biologist and science writer Rachel Carson, who first alerted the U.S. public to the dangers of environmental pollution in 1962. Her book Silent Spring documented humanity's irresponsible, careless, and relentless assault upon the countryside with toxic chemicals such as DDT. She charged that these "synthetic creations of man's inventive mind... have no counterparts in nature" (Carson, 1962, 7). Her controversial book was attacked by the chemical industry, which had been consistently and successfully touting its products as both beneficial and benign. However, and more significantly, Silent Spring helped to fuel a growing public scepticism with regard to the economic status quo.

1.6 The Club of Rome and "Limits to Growth"

In the late 1960's, a group of international philosophers, economists, businessmen, and social and environmental scientists founded the Club of Rome (Gillette, 1972, 1088). The aim of this organization was to gain a better understanding of the world as a finite and fragile system. They recognized global degradation of the environment, social problems, unemployment, and the widening gap between developed and underdeveloped regions as interrelated elements of a common global malaise. The first report of the Club of Rome, entitled Limits to Growth (Meadows et al., 1972) reinforced the anti-growth sentiments and environmental awareness which occupied much of American contemporary thought at that time because of Silent Spring and similar works. In addition, the public had been further shocked out of its lethargy by the "Torrey Canyon" incident of 1967, in which a supertanker spilt enough crude oil to soil 120 miles of Great Britain's coastline and kill over 100,000 seabirds. This incident could be interpreted as one of the first in a continuing series of highly publicized "ecodisasters" (Newsweek, 1967, 51). In technical terms, Limits to Growth used a computer-simulated model developed at the Massachusetts Institute of Technology (M.I.T.) to analyze relationships between global variables (e.g. population growth, pollution, food production, industrialization) and consumption of non-renewable resources. Extensive historical data for each variable were entered into their computer, and through a series of mathematical equations, "feedback loops" were constructed to gauge the effects of changes on each variable over time. The essential issue under scrutiny was the determination of how long population and industry could continue to grow on our finite planet (Time, 1972, 36). The findings indicated that unless current world trends in population growth and industrial output were checked, and unless pollution was severely curbed, civilization could face a catastrophic collapse within 100 years (Meadows, 1972, 23). Whether that particular scenario was justifiable or not, Limits to Growth may be seen as the "first vision of apocalypse ever prepared by a computer" (Church, 1972, 44). Earlier concerns of environmentalists which had often been based on intuition were now being substantiated through the use of modern technology. Moreover, the accompanying call for a reassessment of our insatiable growth ethic revitalized the two-century old assertion of Thomas Malthus that we live on a finite planet with a fixed resource base incapable of accommodating infinite growth. Even the harshest critics of Limits to Growth conceded that for a book to generate such public debate over a concept was no small achievement (Freeman, 1973, 6). Subsequent books by the Club of Rome, such as Mankind at the Turning Point (Mesarovic, 1976), echoed similar sentiments, and continued to call for a new era in environmental activism.

Independently of the Club of Rome, Britain's leading ecological magazine (The Ecologist) published a study in 1972 entitled Blueprint for Survival. The report was endorsed by 33 prominent scientists, among them Sir Julian Huxley, the eminent biologist and ecologist. The Blueprint also warned of an impending breakdown of society and its life support systems, but suggested that such a possibility could occur as early as the end of this century (Time, 1972, 37). Although such timelines appear in retrospect to have been overdramatic and unduly alarmist, their inaccuracy does not justify the tendency of many observers to assume that a serious problem does not exist, or that remedial action is not necessary.

1.7 Environmentalism as an International Issue

The growing environmental crisis was elevated to the international scene in June of 1972 with the convening of the United Nations Conference on Human Environment, in Stockholm. In response to a growing tide of pressure exerted by non-governmental organizations, citizens groups and the scientific community, national governments were persuaded to recognize the international character of environmental issues, and to participate in a multilateral forum on environmental problems (Ward and Dubos, 1972; Strong, 1973; Commoner, 1974). This conference was one of the earliest international initiatives in which delegates from various countries and different economic systems could debate the relationship between "economic development and environmental productivity, or whether a state had any obligation at all to refrain from damaging the environment of a neighbour" (Roots, 1988, 80). Despite the apparent conflict between national economic and ecological interests, the official declaration of the conference was still sufficiently broad to receive general approval for all proclamations (Mikesell, 1974, 17). For example, the first proclamation stated that "man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being" (The World Commission On Environment and Development, 1987, 330). Moreover, it became the obligation of each government to improve the quality of the environment, while ensuring its protection for future generations (MacNeil, 1974, 63). Following the Stockholm conference, various countries began to amend their constitutions and/or enact legislation to recognize this obligation (Pearson, 1974).

1.8 Schumacher and Lovelock: Toward a Paradigm Shift?

A major voice for environmentalism during the early 1970's was provided by Ernst Schumacher, who advocated the implementation of "Intermediate" or "appropriate" technologies based upon environmentally sustainable economies compatible with local settings. His most famous book, Small is Beautiful (1973), gave

rise to a new expression, and fostered a new attitude which questioned many fundamental assumptions of the orthodox free market paradigm. "Appropriate technology", for example, was to use "the best of modern knowledge and experience", yet be "conducive to decentralization, compatible with the laws of ecology, (and) gentle in its use of scarce resources" (Schumacher, 1973, 149-150). Thus, Schumacher did not reject modern technology, but averred that it had to be reconciled with the vision of a humane, sustainable and equitable lifestyle for everyone. Lest Schumacher be dismissed as little more than a utopian theorist, it should be noted that numerous organizations and projects which seek to carry out his ideas have been established throughout the world. An extensive inventory of these developments has been provided in the book Small is Possible by George McRobie (1981). For example, India's Appropriate Technology Unit at the Institute of Technology in Bombay has devoted its staff and student time to designing and testing low-cost and non-destructive machinery for use in rural areas. This group was able to produce a miniature version of a citronella distillation plant feasible for farms as small as two acres (citronella, derived from a tropical grass, is used as an environmentally benign insect repellent). Previously, fifty acres of land were required to make this machine economically viable in rural areas. (McRobie, 1981, 194).

In 1969, the British scientist James Lovelock first proposed the radical idea that the Earth behaves as a living organism. He named his hypothesis "Gaia" after the earth goddess of the ancient Greeks. This concept delves into the relationship between the Earth and its biosphere. The Gaia hypothesis postulates "that the physical and chemical conditions of the surface of the Earth, of the atmosphere, and of oceans has been and is actively made fit and comfortable by the presence of life itself" (Lovelock, 1979, 152). Traditional thinking has held the opposite view that the environment shapes and controls life. Lovelock refers to the rainforest, wetlands and soils of the earth as the "skin" of Gaia: the survival of humanity depends upon the establishment of a respectful working relationship with the skin and other vital organs. Generally dismissed at first, the Gaia hypothesis came of age as a respectable subject within the scientific establishment during the Chapman Conference (convened by the American Geophysical Union) of 1988, in the wake of the Brundtland Report (see p. 14) (Gardner, 1989, 42).

With their theoretical ideas regarding environmentalism and economics, both Schumacher and Lovelock may be pointing the way to what Thomas Kuhn calls a "paradigm shift", or a fundamental change in the way that society views itself and the surrounding world. Whereas the dominant mode of thinking in the Western world had been based (and perhaps still is) upon an ethos of economic growth, progress fuelled by technology and a world dominated and controlled by man, the new thinking of environmentalism stresses restraint,

economic stability (as opposed to growth), and the notion of man as one element within an interdependent earth. If true, it is as if the stewardship of Francis of Assisi was to finally prevail over the traditional Judeo-Christian thread of dominion.

1.9 The World Conservation Strategy

Indicative of the increasing role played by multilateral organizations since the Stockholm Conference, the World Conservation Strategy (WCS) was published in 1980 as a joint effort by the United Nations Environment Program (UNEP), the International Union for the Conservation of Nature and Natural Resources (IUCN), and the World Wildlife Fund (WWF). Miles (1989, 18) suggests that the Strategy was a "well-reasoned attempt" to address growing public indignation over the slow pace of governmental response to the deterioration of the earth's life-support systems. This indignation had recently been fuelled by such well-known eco-disasters as Love Canal (Brown, 1981; Gibbs, 1982), Three Mile Island (Flavin, 1983), and Chernobyl (Flavin, 1987), and was to be further nurtured by a 1985 report that a hole in the ozone layer was forming over Antarctica since 1979 (Shea, 1988). The IUCN purports that the WCS should be used as a management tool by government policy makers, conservationists, and development practitioners in the local and international continuum. More importantly, the WCS functions as a "mediating link between no-growth and expansionist groups, providing a new way to incorporate environmental concerns into development proposals" (Dunster, 1990, 75). It is here, in this document, that the International Union for the Conservation of Nature and Natural Resources (IUCN) first coined the term "sustainable development" as a concept which can be embraced by both factions of the ongoing economic and environmental debate. The WCS clearly and concisely outlines how development and conservation are mutually interdependent. This concept implies that the use of conservation measures is essential in ensuring sustainable development. The following three objectives form the essence of the WCS, and form a framework for priority requirements which should be incorporated into national and sub-national government conservation strategies:

- "to maintain essential ecological processes and life-support systems (e.g. soil regeneration and protection, the recycling of nutrients and the cleansing of waters), on which human survival and development depend;

- to preserve genetic diversity (the range of genetic material found in the world's organisms), on which depend the breeding programmes necessary for the protection and improvement of cultivated plants and domesticated animals, as well as much scientific advance, technical innovation, and the security of the many industries that use living resources; and

- to ensure the sustainable utilization of species and ecosystems (notably fish and other wildlife, forests and grazing lands), which support millions of rural communities as well as major industries" (WCS, 1980, 1).

Unfortunately, the organizations (i.e. UNEP, IUCN, WWF) involved in the compilation of this report put the onus on individual governments to adopt and implement their recommendations (WCS, 1980, 20). Miles (1989, 18) implies that they "did not go out and sell it," and thus governments were lax in endorsing the WCS. For example, although the Canadian Minister of Environment agreed to endorse the WCS on behalf of the federal government in October 1981 (Pollard, 1986, 4), it was not until 1986 that a Canadian response was drafted in readiness for the IUCN Conference on assessing the progress made towards implementing the WCS held in Ottawa (Kelly, 1987, 9). This document, entitled the World Conservation Strategy - Canada: A Report On Achievements In Conservation (Pollard, 1986) was prepared by the Department of Environment (DOE) in conjunction with other federal agencies, and highlights regional, national and international conservation programs and policies which are consistent with the goals and objectives of the WCS (Pollard, 1986, iii).

1.10 Global 2000 and its Critics

The Global 2000 Report to the President (1980) represents another milestone in the emergence of a widespread sense of environmental awareness and concern. This Report was commissioned in 1977 by President Carter to provide a detailed review of the planet's population, natural resources and environmental problems, projected to the end of this century. More importantly, Global 2000 was to "identify and strengthen the Government's capability for long-term planning and analysis" (Barney, 1980, 6). The 766-page Report concluded that the world would be "more crowded, more polluted, less stable ecologically, and more vulnerable to disruption" (Barney, 1980, 1) if current trends continued unabated. However, the Report also noted that some significant positive steps were being taken (for example in the areas of family planning, reforestation and energy conservation), although much more needed to be done. It is significant to note that 1980 also marked the accession to power of President Ronald Reagan, whose administration was characterized by a distinct lack of action on environmentally-related issues. An early Secretary of the Interior, James Watt, maintained a confrontational attitude toward environmentalists with his support of large-scale mining on public lands, and the gradual elimination of most environmental regulations, which he believed to be inimical to the continued economic development of the United States (Kinkead, 1981). The attitudes of the Reagan administration fostered several academic critiques of Global 2000, notably the Heritage Foundation's 1984 tome, The Resourceful Earth, which

touted itself as "a devastating indictment of all doomsday books" (Simon and Kahn, 1984, back cover). The Resourceful Earth maintained that circumstances (economic, environmental) throughout the world were improving rather than deteriorating, that Global 2000 erred fundamentally in extrapolating current trends into the future, and that governmental interference in the management of the environment was unwarranted (Olson, 1983, 48-49). Among its major conclusions, the report asserted that deforestation was not a significant global problem, the climate was not showing any unusual signs of change, minerals were becoming more abundant due to technology's ability to discover new reserves, and that "threats of air and water pollution have been vastly overblown" (Simon and Kahn, 1984, 2-3). The Resourceful Earth represented a classic example of the science/progress paradigm which maintains that technology will inevitably carry mankind along a path of economic progress, and that human beings possess an imaginative capacity to solve virtually any problem (i.e. the "technical fix"), especially within the context of free market economies (Time, 1981, 26).

1.11 The Worldwatch Institute: Toward Concrete Solutions

A book authored by Lester Brown in 1981 was among the first to suggest concrete solutions to the looming problems cited in reports such as Global 2000. His book Building A Sustainable Society was designed by the author to provide policy makers and planners with a broad management tool for decision making. Among the suggestions offered to "shape our economic and social systems so that natural resources and life-support systems are maintained" (Brown, 1984, 2) were: introduction of financial legislation disincentives directed toward polluters, improvement of regulation control, and public environmental education. Lester Brown is also the founder and President of The Worldwatch Institute, a Washington-based research organization established in 1975. Its mandate was to inform policy makers, economists, environmentalist and the general public about the interdependence of the world economy and its environmental support systems. Since 1984, the Institute's research staff has assessed the world's resources, monitored their management and use, the results of which are published annually in their State of the World Report. In addition, Worldwatch also produces individual papers which deal with specific issues from forestry (Eckholm, 1978; Postel, 1984; Postel, 1988), biological diversity (Eckholm), to species extinction (Wolf, 1987).

1.12 The Brundtland Report: Environmentalism to the Forefront

The United Nation's General Assembly again reviewed the state of the world's environment a few years after the release of the World Conservation Strategy. Their findings indicated that

> "although there had been a lot of progress, there had been some slippage during the world recession and the global environment was still deteriorating. In the meantime, the destruction of tropical forests, the destruction of endangered species of animals and plant life, and the destruction of genetic resources were actually getting worse" (Strong, 1990, 10).

In reaction to these findings, the 38th Session of the UN General Assembly adopted Resolution 38/161 in the fall of 1983 to establish The World Commission on Environment and Development (WCED, 1985, i). The creation of this Commission signalled the high priority given to environmental and developmental issues on the international political agenda of the UN General Assembly. The Commission adopted the following three objectives at their inaugural meeting in Geneva on October 1-3, 1984:

> "(i) to re-examine the critical issues of environment and development and to formulate innovative, concrete and realistic action proposals to deal with them;
>
> (ii) to strengthen international co-operation on environment and development and to assess and propose new forms of co-operation that can break out of existing patterns and influence policies and events in the direction of needed change; and
>
> (iii) to raise the level of understanding and commitment to action on the part of individuals, voluntary organizations, businesses, institutes and governments" (WCED, 1985, 9).

Three years of research, over 500 written submissions and intense public hearings held on each continent culminated in the publication of Our Common Future (commonly referred to as the Brundtland Report after the Chairperson, Madame Gros Harlem Brundtland, then Prime Minister of Norway) in 1987. The Report focused on the interrelated elements of population and human resources, food security, species and ecosystems, energy, industry and the urban challenge, all of which determine the future viability of the environment to sustain human life. These "common" perspectives were selected by the Commission because of their universal relevance and applicability. For example, the Species and Ecosystems section calls for all national governments to recognize the disappearance of species and habitats, and to establish the importance of ecosystems protection as a priority

item on the political agenda. Furthermore, the Commission stresses that all levels of government have a duty to review all their existing policies and programs to anticipate and prevent further destruction of species habitats. The Commission points out the need for better wildlife and protected area-management through the reinforcement and expansion of existing strategies. National Conservation Strategies and a future international "Species Convention" (similar to the existing Law of the Sea) are cited as vital tools for improving the co-ordination of conservation and development efforts (WCED, 1987, 162-166). Moreover, the Report states that ecosystems function independently of legal ownership rights and imposed political boundaries in the landscape, and that issues regarding their protection should be addressed through multi-lateral mechanisms such as those established by the United Nations (WCED, 1987, 46).

Transcending themes interwoven throughout the entire report include interdependence, education and communication, equity, security, environmental risks, international co-operation and sustainability. The latter theme, popularized by the term "sustainable development", is perhaps the most influential factor contributing to a high degree of support for this document throughout the world. Unlike the definition of sustainable development espoused by the World Conservation Strategy, the WCED offered a more conservative definition of this term, primarily to promote acceptance of the concept among economists and developers. The WCED (1987,8) defined sustainable development as the ability "to make development sustainable - to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs". To be sure, implicit within this definition is the realization that there are limits imposed "by the present state of technology and social organization on environmental resources and by the ability of the biosphere to absorb the effects of human activities" (WCED, 1987, 8). Critics have interpreted this statement to imply a support in the Brundtland Report for the Malthusian doctrine of a finite resource base (McRuer, 1989,37). However, the WCED has added a clear disclaimer to disassociate itself from the Malthusian principle, indicating that these limits are not absolute. Echoing the sentiment of The Resourceful Earth, the Committee has acknowledged that man's "accumulation of knowledge and the development of technology [e.g. substitution, recycling] can enhance the carrying capacity of the resource base" long before the limits are attained (WCED, 1987, 45). In doing so, the Commission has garnered sympathy from certain political and business interests which had been less sympathetic toward earlier, more Malthusian-oriented reports such as the Global 2000.

The Brundtland Report also emphasizes the imperative of addressing the problems of the so-called Third World. The concept of "needs" as stated in the above definition of sustainable development is further clarified by the WCED (1987, 43) as the "essential needs of the world's poor to which over-riding priority should be given".

Rees (1989, 1), a professor of community and regional planning at the University of British Columbia, writes that many individuals in their original fervour over the definition of sustainable development neglect this application of the concept to the theme of underdevelopment and poverty. Sustainable development is thus applicable to both developed and developing countries.

At this juncture, it is useful to assess the impact of the Brundtland Report with respect to the three objectives originally established by the WCED (see pp. 11 and 12). While the Report effectively outlines the problems and points to general solutions, it does not provide definitive instructions and strategies for those wishing to implement actions based on the concept of sustainable development (Langer, 1989, 30). The second objective of strengthening international co-operation and proposing new forms of co-operation cannot yet be fully assessed due to the inherent time lags involved in establishing any new form of bureaucracy, particularly at a multilateral level. It is with respect to the third objective that the Report may be considered an overwhelming success. More than any previous effort, the Brundtland Report has succeeded in raising levels of environmental awareness among those in government, business, organizations, and the general public, even though the Report does not add anything essentially original to the debate. According to McRuer (1989, 36), the Report "has retained its high profile, and is now the point of departure of all discussion, not just of the emerging environmental situation, but of economic development as well".

PART TWO

CANADA RESPONDS: TOWARDS SUSTAINABLE DEVELOPMENT

2.1 Canada and the Brundtland Report

The visit by the Brundtland Commission to Canada during May of 1986 prompted the Canadian Council of Resource and Environmental Ministers (CCREM) to establish a National Task Force on Environment and Economy later that same year, in anticipation that the Brundtland Report would soon be brought to the fore in deliberations of the United Nations General Assembly, and that Canada's response would be solicited by the international community. The purpose of the Task Force, initially, was to clarify "the nature of the relationship between conservation strategies and the concept of integration of environment and the economy" (Manning, 1989, 21). In addition, Manning (1989, 22), Chief of Conservation Strategies and Development with Environment Canada's Sustainable Development Branch, stated that the precise role of federal, provincial, and territorial governments needed to be defined, along with the desired levels of involvement from non-governmental organizations (NGO's), the business community and the general public. Task Force members included the then Federal Minister of the Environment (Tom McMillan), five Provincial and one Territorial Ministers of the Environment, seven CEOs representing large corporations, two NGO representatives, and one academic.

The 17-page Report Of The National Task Force On Environment and Economy (Lecuyer, 1987) was submitted to the CCREM for their approval on September 24, 1987. Forty recommendations were made by the Task Force, which allocated responsibility and completion dates for each item. Three of the most important recommendations of the Task Force were:

a) The formation of territorial, provincial and national multi-sectoral Round Tables on the Environment. These Round Tables were to serve as a forum in which members could discuss environmental-economic issues leading to a consensus on the development of conservation strategies for each jurisdiction. Round Tables were to be fully operational by September of 1988 (Recommendations 3.1 and 3.2) (Lecuyer, 1987, 11).

b) An "action plan" should be developed by each territory, province and federal government describing how it will implement recommendations made by the Task Force (Recommendation 7.1) (Lecuyer, 1987, 16).

c) The main objective of the Report was to have an integrated system of conservation strategies for sustainable development completed and operational prior to the U.N. World Conference on Environment and Development held in Brazil during 1992 (Recommendation 4.4) (Lecuyer, 1987, 13). This conference is timed to take place on the 20th anniversary of the historic Stockholm Conference on the Human Environment (see p. 9).

The Report Of The National Task Force On Environment And Economy was tabled in the United Nations General Assembly as part of Canada's official response to the Brundtland Report in October 1987 (A.C.S., November 1987, 1). The Canadian response represented the first documented support for the Brundtland Report among the world community of nations. Table One summarizes the current progress made on Task Force's three main recommendations at the territorial, provincial and national level. The following sections will examine the federal government's response to the Task Force, which consists of the formation of a National Round Table On The Environment And The Economy (NRTEE) to fulfill recommendation (a) (see sub-section 2.2 of this Report; below), and the creation of the "Green Plan", to meet recommendations (b) and (c) (see sub-section 2.3 of this Report; p.19). Following this discussion, the progress of the twelve provinces and territories with respect to all three recommendations will be addressed.

2.2 National Round Table On The Environment And The Economy

Prime Minister Brian Mulroney announced the appointment of David Johnson as Chair of Canada's NRTEE on October 3, 1988. The original National Round Table was comprised of 25 high-profile leaders from many sectors of Canadian society, including federal ministers Harvie Andre (Industry, Science and Technology), Lucien Bouchard (Environment), and Michael Wilson (Finance), two provincial environment ministers (John Reynolds-B.C.; Glen Cummings-Manitoba), labour, business, academia and environmental organizations. It is interesting to note that the NRTEE's membership represents all areas of Canada except Newfoundland and the North West Territories. The mandate of the NRTEE is

> "to function as an independent multi-sector body that will seek to foster environmentally sustainable economic development... by build[ing] consensus and develop[ing] proposals to integrate environmental and economic decisions in Canadian society" (Prime Minister's Office, 1988, 1).

Other objectives included in the NRTEE's terms of reference are to:

a) "advise the Prime Minister on policies and practices that integrate sustainable development principles into the long-term planning and day-to-day operations of the federal government;

b) encourage change in decision-making practices in Canada through greater understanding of the real costs and viable options for implementing sustainable development;

c) foster a greater understanding of why sustainable development is imperative and how it can be achieved;

d) contribute to international efforts to implement sustainable development; and

e) work in concert with provincial and territorial round tables to advance common objectives" (National Round Table on the Environment and the Economy, March 1990, 26).

The NRTEE is comprised of one standing committee and four working groups (see Figure 1). The former functions as an advisory body on communication within the NRTEE itself, and examines how information on sustainable development can be widely transmitted to as many people and groups as possible so that positive change can be effected. The four working groups consider all aspects of sustainable development as it applies to Socio-Economic Incentives, Decision-Making Processes, Waste Reduction, and Foreign Policy.

2.3 The Green Plan

On March 29, 1990, the federal Department of Environment (DOE) unveiled its action plan, entitled The Green Plan, at a cost of $670,000 (The Leader-Post, 14 May 1990, A2). During the Montreal press conference announcing the release of this document, then Environment Minister Lucien Bouchard stated, "Our commitment is to make Canada, by the year 2000, the industrial world's most environmentally friendly country" (The Globe and Mail, 30 March, 1990, A5). The 31-page document serves as a framework for discussion on environmental issues which are facing both the government and the Canadian public. The discussion paper is divided into the following three sections:

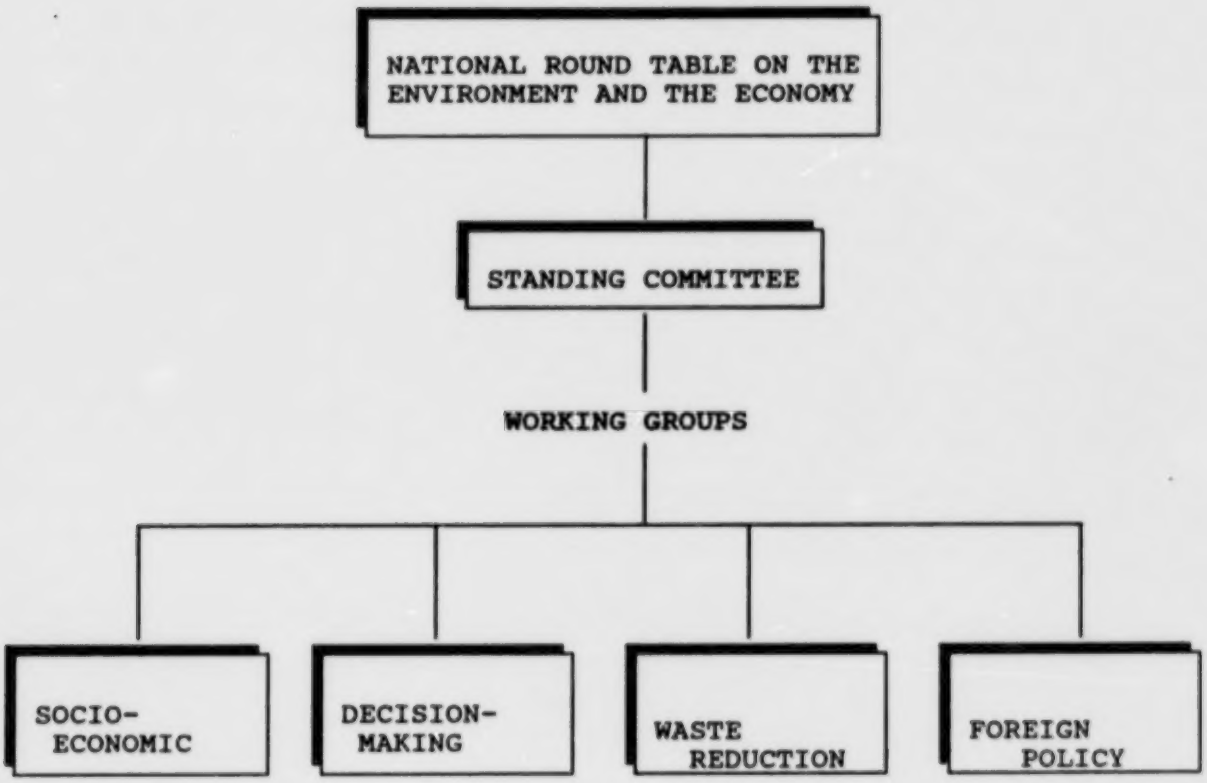
a) background perspective on environmental issues from a global and Canadian standpoint;

b) the need for improved decision-making; and

c) proposed action on environmental issues.

FIGURE 1

NATIONAL ROUND TABLE STRUCTURE



The first section quotes facts and figures pertaining to the environmental degradation of the planet. Issues such as ozone depletion, population pressure, global warming, destruction of the South American rainforest and accelerated rates of plant and animal extinction are outlined. At the national level, the federal report lists Canada as the world's largest per capita producer of garbage, greatest consumer of energy, and one of the leading producers of carbon dioxide (Environment Canada, 1990, 3-5). In the second section, the Federal Government outlines some of the proposed policy initiatives designed to improve decision-making processes relative to the environment. These include; a) an increased commitment to environmental science and technology; b) a commitment to state-of-the-environment reporting by developing better data bases and improved presentation format; c) co-operation with the provinces to develop environmental education programs; d) a commitment to both strengthen and review existing legislation and regulation policies (e.g. the need to define provincial and federal role with respect to the Canadian Environmental Protection Act); and e) adoption of a code of environmentally-appropriate behaviour for all federal departments (Environment Canada, 1990, 7-15).

The final section of The Green Plan lists the following five broad areas of environmental concern: toxic substances and water; atmospheric change; management of renewable resources (i.e. agriculture, forestry, fisheries); management of ecological heritage resources (i.e. Parks and Heritage Resources, and Wildlife); and the Arctic. For the most part, this section simply poses questions to the readers asking them to offer their suggestions or solutions to these environmental concerns. As such, it is difficult to describe The Green Plan as a concrete "action plan". For example, while the federal government states its intention to establish five new terrestrial parks and three marine parks by 1995, funding to carry out these proposals is not committed (Environment Canada, 1990, 28).

The publication of this discussion paper marks the first phase towards developing a national conservation strategy for Canada. Phase One also entailed a series of information sessions in 35 cities across the country between April 17 and May 10 to familiarize the public with the Department of Environment's Green Plan. At an information session in Regina on May 1st, individuals from DOE, as well as other federal departments were on hand to answer questions about their areas with respect to the Green Plan. No additional documentation on the procedure of the Green Plan was available at these sessions. The public was allowed to view posterboard displays and pick up pamphlets on a wide variety of department topics. Before individuals left, they had the opportunity to fill out a questionnaire which solicited responses on the general quality and ability of individuals to answer your questions. Individuals could also sign up for future workshops on various topics dealing with sustainable development issues at a later date.

Phase Two will entail a series of "consultation workshops" to be held in all provincial and territorial capitals between May 21 and June 30, 1990. Workshop topics, according to title, are; Environmental Stress, Global Commons, Sustaining Our Renewable Resources, Preserving Ecological and Heritage Resources, Arctic Ecosystems and Aboriginal Peoples, and Green Plan-Improving Decision-Making. Inputs from Phases One and Two will be combined to produce an action plan in Phase Three, which is tentatively scheduled for release this fall. Phase Four will subsequently entail the actual implementation of the action plan. It should be noted at this junction that Lucien Bouchard resigned as the Minister of the Environment on May 22, 1990. Since Mr. Bouchard has been very closely associated with the Green Plan, the status of that discussion paper, as well as other planned environmental initiatives (e.g. reform of the environmental assessment laws, and national strategies for attacking the threat of climate change from carbon dioxide emissions) is now uncertain (Howard, 23 May 1990, A11).

The initiatives planned by the federal government may be put into international context by comparing them with the progress of other countries. On one hand, many countries, particularly in the Third World, have not even embarked on the initial phases of a conservation strategy (Public Advisory Committees To The Environment Council of Alberta, 1987, 78). This lack of action can be attributed to a lack of resources to carry out such a task, and to the relatively low priority placed on environmental issues in the face of serious and immediate economic and social problems. On the other hand, certain developed countries have progressed far beyond the initiatives of Canada. The government of The Netherlands, for example, has committed itself to what is perhaps the most ambitious environmental strategy of any country. As a top government priority, the so-called National Environment Plan, unveiled in May 1989, aims to dramatically reduce pollution over the next twenty years at a cost of 350 billion florins (approx. Can$250 billion) (Raun, 1989, 23). Canada pales by comparison, especially when one realizes that the Green Plan represents an emasculated version of the original master strategy, which was to entail a five-year, $2 billion direct commitment to environmental protection, scientific research, public education, and tax breaks and other incentives for industries achieving pollution reductions (Howard, 2 February 1990, A1). The failure of this original, more ambitious proposal has been attributed to negative reaction from Mr. Bouchard's cabinet colleagues, who felt that their own portfolios would be threatened by a powerful Environment ministry that would divert funds away from other areas (Howard, 2 February 1990, A1). In addition, this alienation was increased when other cabinet ministers were not consulted during the draft phases, which were shrouded in secrecy (Wallace, 9 April 1990, 16).

2.4 The Provinces and Territories Respond

As indicated in Tables 1-A and 1-B, the twelve provinces and territories of Canada have achieved variable progress toward the formulation of conservation and/or sustainable development strategies. While Prince Edward Island and Yukon are clear frontrunners, it is very difficult to rank the remaining jurisdictions in any accurate or meaningful way. Therefore, the analysis will proceed alphabetically, and will be followed by some discussion in the conclusion as to relative progress. Where appropriate, parallel or independent initiatives (e.g. Environment Council of Alberta, which has published a prospectus) related to the development of strategies will be discussed.

2.4.1 Alberta

Two years prior to the release of the Report of The National Task Force On Environment and Economy, Alberta began working toward a draft conservation strategy for the province. In December of 1985 at an annual joint meeting of Public Advisory Committees (PACs) with the Environment Council of Alberta (ECA), the draft of a prospectus was unanimously endorsed by both groups (A.C.S., December 1986, 1). Although the ECA receives its funding from the provincial government, this crown corporation was designed to operate at "arm's length ... and provide the Minister of Environment and Cabinet a viewpoint and advice from outside the government bureaucracy on matter's effecting Alberta's environmental quality" (Kelly, 1987, 10). Under provincial legislation, the ECA was authorized to maintain and support PACs (Kelly, 1987, 10). The PACs are comprised of representatives from over 135 organizations in Alberta, with a membership of approximately 180 individuals. PAC members represent a wide variety of interests representing industrial associations, Chambers of Commerce, agricultural organizations, health care groups, academia (e.g. college and university levels) and Albertan cities. A Steering Committee and seven other sub-committees (i.e. Environmental Education, Renewable Resources, Energy and Non-renewable Resources, Environmental Protection, Rural Environment, Urban Environment) form the composition of the PAC.

By March of 1986 [Revised, March 1987], the 78-page Prospectus For An Alberta Conservation Strategy was published by the PACs for the Environment Council of Alberta. This document presents the case for developing an Albertan Conservation Strategy based on the principles contained in the World Conservation Strategy. It was also intended to educate and stimulate interest in developing a provincial policy. More importantly, the prospectus describes six objectives which should be incorporated into the provincial conservation strategy. The PACs have adopted three objectives from the WCS (i.e. maintenance of essential ecological processes,

TABLE 1-A
STATUS OF CANADIAN ROUND TABLES, ACTION PLANS AND CONSERVATION/SUSTAINABLE DEVELOPMENT STRATEGIES°

	YUKON	NWT	B.C.	ALTA.	SASK.	MAN.
Round Table	A▲ Oct. 1989	B (Fall)■ (1990)	A Jan. 1990	B (1990)	A Mar. 1989	A Oct. 1988
Action Plan	A June 1988	B	C (1990)	C (1990)	B	B Nov. 1989
Conservation/ Sustainable Development Strategy	A (May) (1990)	B (1992)	B (1992)	B,C* (1992)	B (1991)	B (1992)

Key:

Round Table Information:
- A. Date established
- B. Formation pending (expected completion date)

Action Plan Developed:
- A. Date released to public
- B. Will be developed (expected completion date)
- C. Round Table to assume responsibility
- D. No Action Plan will be developed

Conservation/Sustainable Development Strategy:
- A. Date completed (expected date of release)
- B. Will be developed (expected completion date)
- C. Draft completed

Footnotes:

° *Brackets indicate tentative dates for the establishment or completion of Round Tables, Action Plans and Conservation/Sustainable Development Strategies.*

▲ *The Yukon Council on Economy and Environment.*

■ *The government of the N.W.T. appointed a Round Table Chairman on March 1990. Since this time the Chair has approached the Department of Renewable Resources to develop a process for selecting Round Table members.*

* *A draft Alberta Conservation Strategy was prepared and released by the Public Advisory Committees to the ECA in March, 1986 [Revised, March 1987].*

Sources: See Appendix One

TABLE 1-B
STATUS OF CANADIAN ROUND TABLES, ACTION PLANS AND CONSERVATION/SUSTAINABLE DEVELOPMENT STRATEGIES°

	ONT.	QUE.	N.B.	N.S.	P.E.I.	NFLD.
Round Table	A Oct. 1988	A Aug. 1988	A Aug. 1988	A Oct. 1988	A Jan. 1989	B (1990)
Action Plan	D	B	A Oct. 1989	A Feb. 1990	D	B (1992)
Conservation/ Sustainable Development Strategy	B,C* (1992)	B (1990)	B (Jan.) (1992)	B (1992)	A Mar. 1987	B (1992)

Key:

Round Table Information:
- A. Date established
- B. Formation pending (expected completion date)

Action Plan Developed:
- A. Date released to public
- B. Will be developed (expected completion date)
- C. Round Table to assume responsibility
- D. No Action Plan will be developed

Conservation/Sustainable Development Strategy:
- A. Date completed (expected date of release)
- B. Will be developed (expected completion date)
- C. Draft completed

Footnotes:

° *Brackets indicate tentative dates for the establishment or completion of Round Tables, Action Plans and Conservation/Sustainable Development Strategies.*

* *A draft Conservation Strategy for Ontario was prepared and released by The Conservation Council of Ontario in 1986.*

Sources: See Appendix One

preservation of genetic diversity and assurance of sustained utilization of renewable resource levels) and added the following three to address the specific needs of Alberta:

> "to provide for the recreational, spiritual, aesthetic, and other non-material needs of Albertans by maintaining and developing diverse opportunities for the use of natural resources;
>
> to maintain and improve the quality of life in the urban environment, where the majority of Albertans now live and work; and
>
> to use and manage our non-renewable resources in the interests of developing a long-term sustainable economy for Albertans" (PACs to the ECA, 1986, 15).

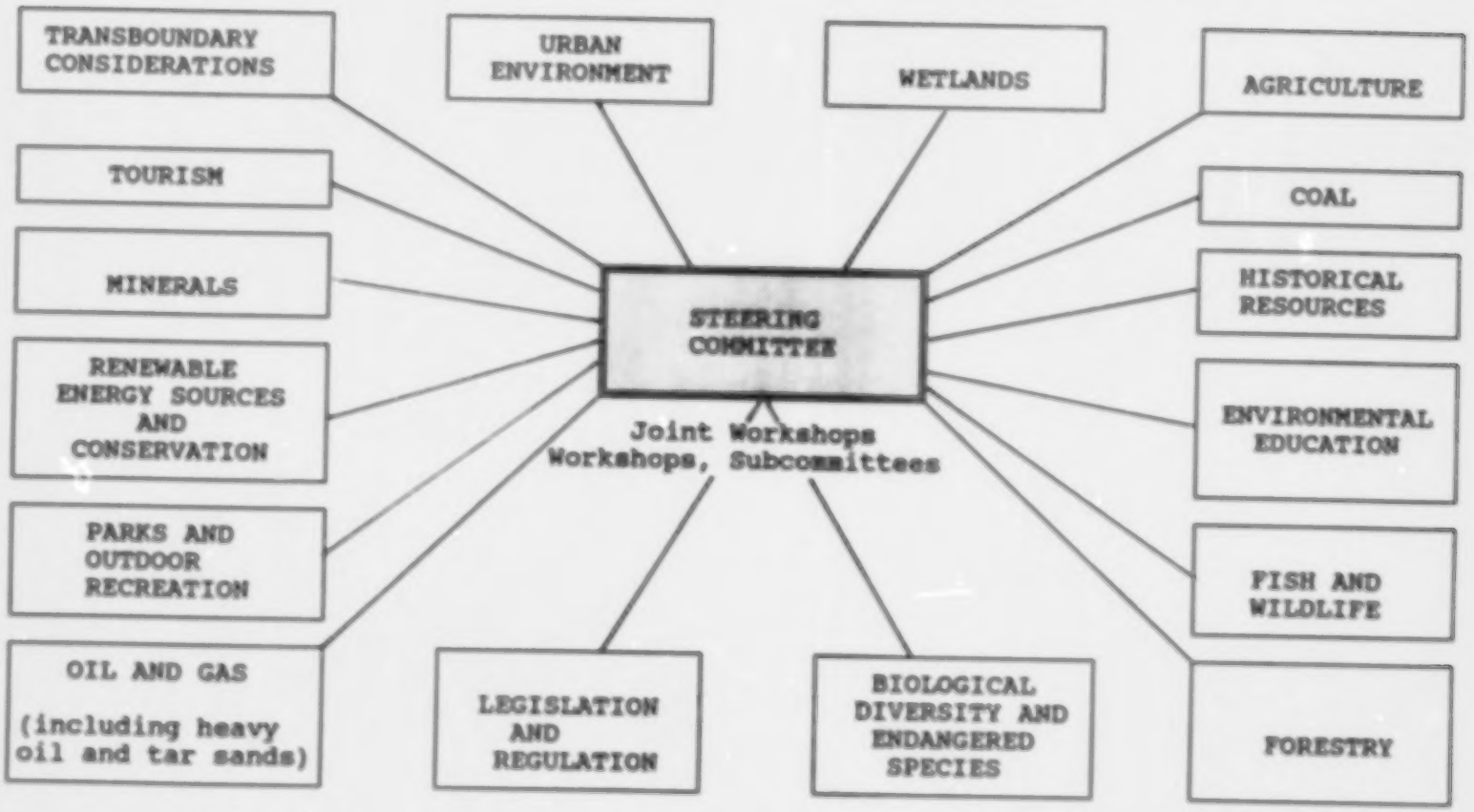
All six of the primary objectives are examined in detail in the Report, along with other chapters which explore the relationship between conservation and development, and background historical material on Alberta.

During the preparation of the Prospectus and after consulting with PAC members, the Steering Committee determined that there was a need to undertake a series of background discussion papers prior to drafting a conservation strategy for the province. A total of 16 sectors were identified as requiring background papers, which would examine sustainable use and development of its particular resources and interactions with other sectors (see Figure 2). Each sectoral working paper was to be divided into the following headings: background information, economic and social significance, demand projections, achieving sustainable use, interactions with competing users, legislation, and other important considerations for deliberation. Each Steering Committee member, with the aid of volunteer assistance from various industries, agencies and other organizations, assumed responsibility for writing a sector paper (PACs, 1987, 71). To date a total of thirteen sectoral papers have been published.

In the 1985 annual joint meeting, the PACs passed a resolution to ask the Albertan Government to authorize the ECA to conduct public hearings when the draft conservation strategy is released (A.C.S., December 1986, 1). However, it was not until April 25, 1990 that the formation of the Albertan Round Table was actually debated in the Alberta legislature (Hicks, pers. commun., April 25, 1990). If established, members of the Round Table would include a Chairman, the Ministers of Environment and Economic Development, twelve sector representatives (i.e. agriculture, academia, business, energy, environmental organizations, forestry, health, labour, law, local urban and rural governments, and native organization), and three "citizens-at-large". The latter members would be selected from the 200+ applications received from the mass

FIGURE 2

ORGANIZATION OF BACKGROUND DISCUSSION PAPERS PREPARED FOR THE ALBERTA CONSERVATION STRATEGY PROJECT



Source: Public Advisory Committee to the Environment Council of Alberta. Prospectus for An Alberta Conservation Strategy. Environment Council of Alberta, [Revised, March 1987], p. 80.

newspaper advertising campaign. The Round Table would also be responsible for developing the Action Plan and the province's sustainable development strategy (see Table 1-A; p. 24). According to Ron Hicks (pers. commun., 25 April 1990), executive director for Corporate Strategy Management Division at Alberta Environment, the Draft Conservation Strategy has been prepared by the PACs, and will be incorporated into the province's sustainable development strategy even though it has not yet been publicly released (pending the formation of the Round Table). The mechanism for preparation of the latter document (e.g. working groups, Task Force) will be determined by the Round Table upon formation.

2.4.2 British Columbia

In July of 1988, the Ministers of Regional Development and Environment of British Columbia announced the establishment of a special Task Force on Environment and Economy to further examine the recommendations published by its federal counterpart in 1987. The mandate of the province's Task Force included: a) determining the role and composition of the Round Table; b) identifying key elements which should be incorporated into a provincial conservation strategy; c) to develop a communications program, which would heighten public awareness and understanding of relationships between the environment and economic development; and d) to report on the "desirability" of adopting other National Task Force and World Commission recommendations by the province (British Columbia Task Force on Environment and Economy, 1989, 1).

In June 1989, after analyzing approximately 200 submitted briefs and consulting with individuals involved in the Brundtland Report, the WCS, and the National Task Force, British Columbia released their report entitled Sustaining the Living Land (also referred to as the Strangway Report, after the Chairperson, David Strangway, President of the University of British Columbia). The Task Force confirmed the need for a Provincial Round Table to act in an advisory capacity to Cabinet. As indicated in Table 1-A, the Round Table was officially announced by the Premier of British Columbia in January of this year. The Round Table is comprised of 31 individuals representing various sectors of society including environmental groups, a native band leader, industry, labour, government and academia. All members of the Round Table were appointed for a three year term. The Premier also announced a budget of $1.5 million for the Round Table (British Columbia, 16 January 1990, 1-2). The Round Table has been charged with the following mandate: to make recommendations for the development of the province's sustainable development strategy; to examine a mechanism to resolve land-use and other environmental-economy conflicts; to promote public awareness on environmental/economic issues; and to recommend the nature and structure of a Sustainable

Development Institute. In order to facilitate this process, Task Force members were divided into four core groups with a chairman appointed for each during mid-March of this year. Each core group is presently developing a workplan, which will be submitted at the next meeting of The Round Table in June (Focus B.C., March 1990, 3).

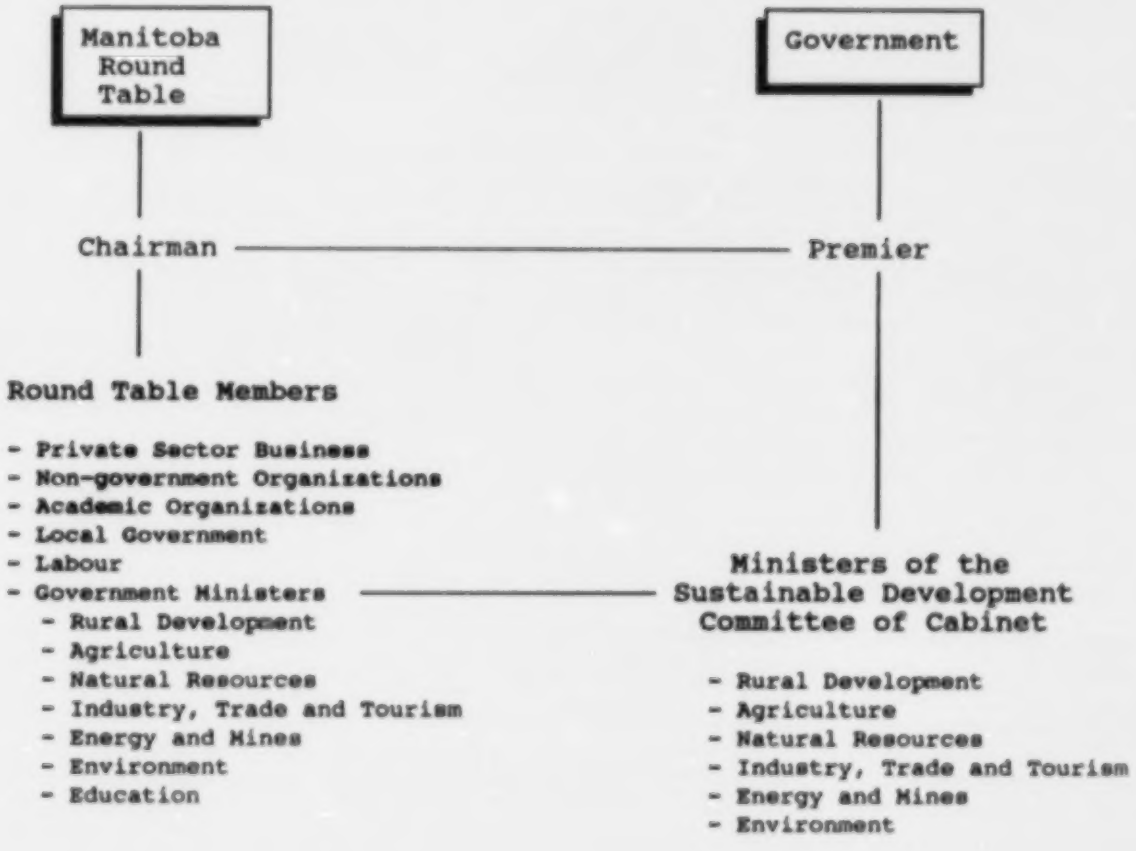
2.4.3 Manitoba

The appointment of Manitoba's Round Table on Environment and Economy was announced by Premier Gary Filmon on October 5, 1988. Currently, Filmon is the only Premier within Canada to act as a provincial Round Table Chairman. Other members of the Round Table include six government Ministers and representatives from the private sector, business, non-governmental organizations, academia, local governments and labour (Manitoba Information Services, 5 October 1988, 1). The same six key Cabinet Ministers on the Round Table also comprise the Sustainable Development Committee of Cabinet, which "oversees provincial planning activities and processes [e.g. policy guidance] required to develop and implement sustainable development... initiatives" within the government structure (see Figure 3) (Manitoba Round Table on Environment and Economy, February 1990, 11). Both the Round Table and the various sub-committees (as described below) adhere to the consensus approach to decision making. A "consensus" has been reached when no objections are raised by members to a decision (Pursaga, pers. commun., 2 May 1990).

The mandate of the Round Table can be described by the following Mission Statement: "to promote environmentally sound and sustainable economic growth in Manitoba by facilitating policies, programs and action plans that integrate environmental concerns with economic decisions" (Manitoba Round Table on Environment and Economy, March 1990, 16). In order to fulfil this mandate the Round Table created an Executive Committee and seven sub-committees (i.e. Sustainable Development Strategy; Communication and Education; Market Incentives & Fiscal Policy; Public Sector Implementation; Codes of Practice; Demonstration Projects; State of the Environment Reporting) to oversee the implementation of the National Task Force recommendations (see Figure 4). Membership on both the Executive Committee and other sub-committees are comprised of Round Table Members who share an interest in the area. Round Table members may sit on both the Executive Committee as well as any number of the sub-committees (Pursaga, pers. commun., 2 May 1990). The Executive Committee was established to facilitate the work of the various sub-committees (e.g. review reports, status of workplans), setting the agenda for Round Table meetings, making administrative decisions and reviewing external submissions to the Round Table. The province also established a Sustainable Development Coordination Unit to support the Round Table by providing management and secretarial functions (see Figure 4).

FIGURE 3

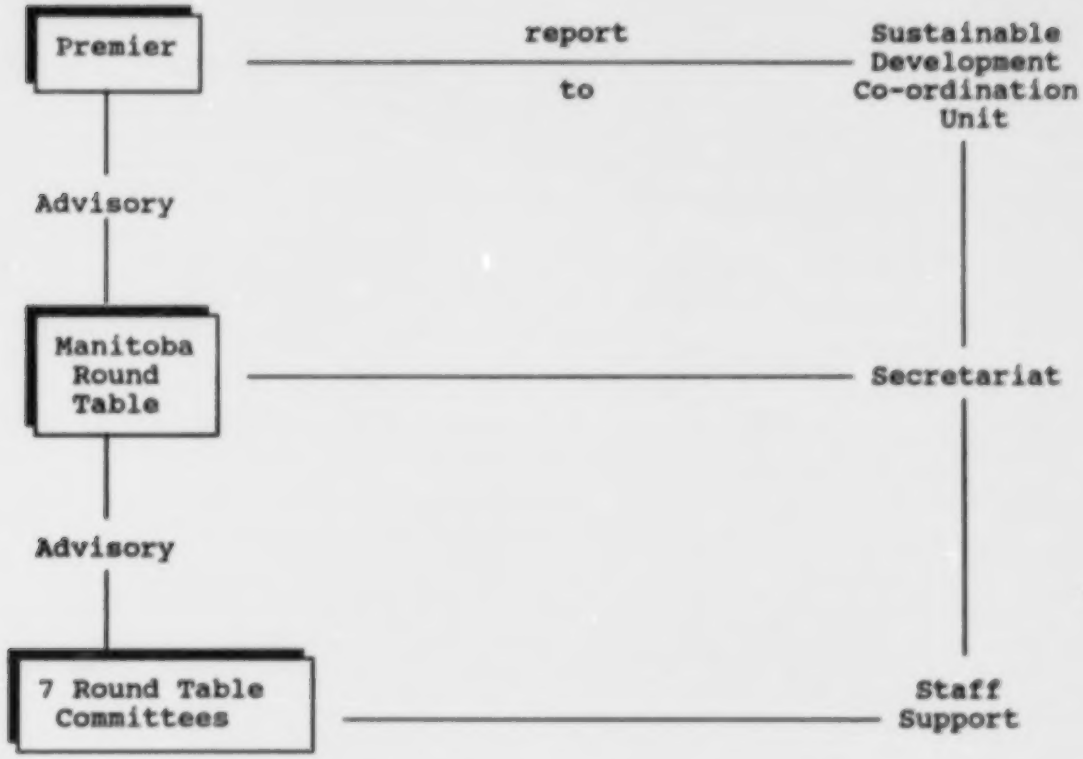
MANITOBA ROUND TABLE/PROVINCIAL GOVERNMENT RELATIONSHIP



Source: Manitoba Round Table on the Environment and Economy. Sustainable Development: Public Sector - Development In Harmony With Our Environment, [February 1990], p.4.

FIGURE 4

MANITOBA ROUND TABLE STRUCTURE



- Sustainable Development Strategy
- Public Sector
- Market Incentives & Fiscal Policy
- State of Environment Reporting
- Communications & Education
- Demonstration Projects
- Codes of Practice

Source: Manitoba Round Table on Environment and Economy. Sustainable Development Public Sector - Development In Harmony With Our Environment, [February 1990], p.2

Manitoba's Sustainable Development Strategy is considered a joint project between the Round Table and the Province. The Sustainable Development Strategy Sub-Committee is in the process of completing the framework or "Sustainable Development Core Strategy", which outlines the "beliefs, vision, fundamental principles and guidelines, process and component strategies". When combined, these elements will form the basis of a sustainable development strategy for Manitobans (see Figure 5)(Manitoba Round Table on Environment and Economy, March 1990, 24). The Manitoba Land and Water Conservation Strategy, for example, was initiated by the province in 1989 to "create a growing and diversified economy for the province while promoting a safe and sustainable environment". This sub-strategy entails the study of various components including fisheries, wildlife, soil conservation, water, forestry, mineral development, transportation, agriculture, outdoor recreation and tourism, which will culminate in new policy initiatives for the province (see Figure 6) (Sustainable Development, April 1989, 9). The Manitoba government has placed a high emphasis on public input (e.g. 10 public meetings, 28 workshops, 132 written submissions) in the formulation of its Land and Water Sub-Strategy (Agenda, December 1989, 3). These inputs are summarized in a booklet entitled Sustainable Development Land & Water Strategy: A Summary Of Public Input-What You Told Us (November 1989).

2.4.4 New Brunswick

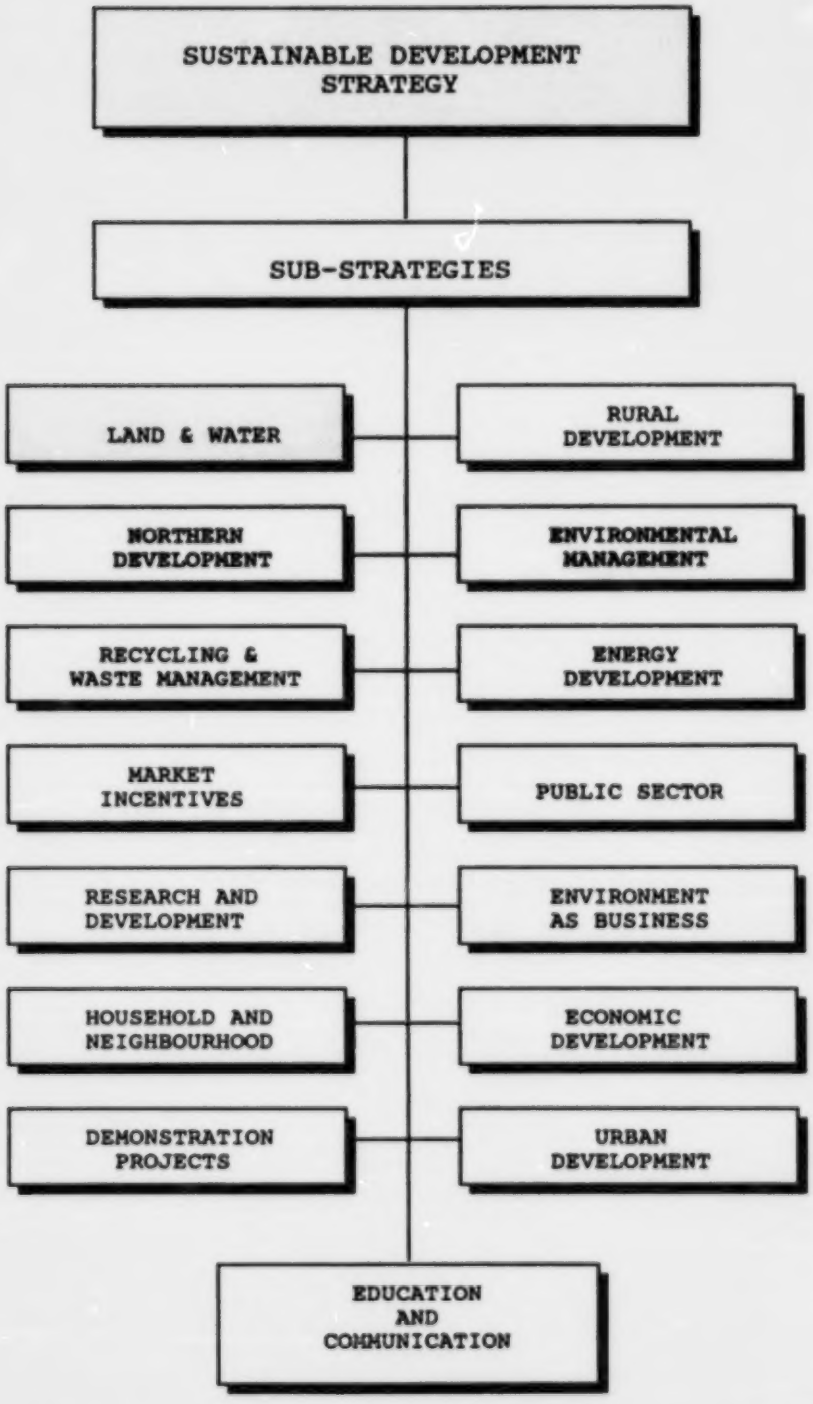
The New Brunswick Premier's Round Table on Environment and Economy was announced on August 17, 1988. A total of fifteen senior "decision makers" were appointed to the Round Table, with representation from government, labour, academia, and private and public sectors. Among the significant Terms of Reference for the Round Table are the following;

> "i) developing a schedule for reviewing and advising the Premier with respect to the forty recommendations made by the National Task Force on Environment and Economy;
>
> ii) advising the Government on an appropriate methodology and structure for the development of a provincial Conservation Strategy; and
>
> iii) offering advice on specific routes by which the public can be directly consulted on the issues related to sustainable development and integration of environmental protection with economic development" (Connery, 1988, 21-23).

The Round Table has outlined the following five sustainable development principles which should be addressed in the province's conservation strategy: a) the incorporation of the three main objectives (maintenance of essential ecological processes, preservation of genetic diversity and assurance of sustained

FIGURE 5

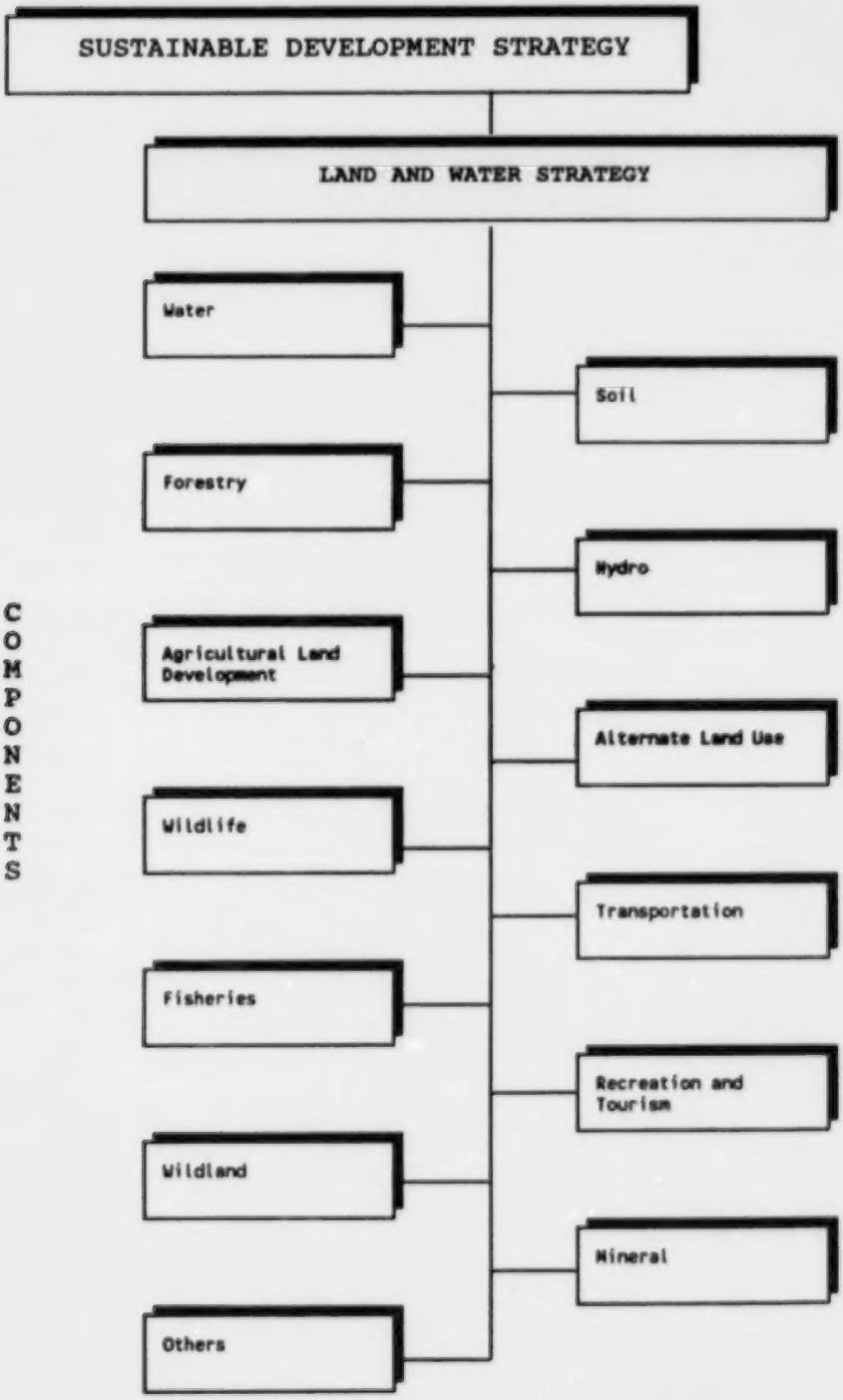
MANITOBA'S SUSTAINABLE DEVELOPMENT STRATEGY



Source: Manitoba. Sustainable Development - Land & Water Strategy: Workbook on Forests, [n.d.], p.2

FIGURE 6

COMPONENTS OF THE LAND AND WATER STRATEGY



Source: Manitoba. Land & Water Strategy: The Process Begins - Workbook on Water, [n.d.], p.3

utilization of renewable resource levels) of the WCS; b) the need to weigh equally and integrate economic and environmental factors in the province's decision making process; c) all economic development projects must demonstrate economic and environmental sustainability; d) non-renewable resources must be managed on an environmentally-sound economic basis; and e) the development of renewable resources should be encouraged over non-renewable resources (New Brunswick. Premier's Round Table On Environment And Economy, 1989a, 13-14). As indicated in Figure 7, the Round Table has completed the first phase of their consultation program, which entailed holding a series of public meetings throughout New Brunswick during the months of November 1989 and January 1990. The Round Table also established in February of this year a series of 13 provincial conservation strategy "sectoral groups", whose members include: government representatives from each sector, the public, environmental and consumer interest organizations (see Figure 8). Each sector group is responsible for submitting a report to the Round Table by September, which will culminate in the development of a draft strategy for the province (see Figure 7).

2.4.5 Newfoundland

While the Legislative Assembly of Newfoundland has made a commitment to producing a conservation strategy, no direction on its implementation has yet been decided. According to David James, Assistant Deputy Minister for the Department of Environment and Lands, a commitment has been made to the formation of a provincial Round Table in Newfoundland (pers. commun., 25 April 1990). Composition of Round Table members, funding, and terms of reference is currently pending approval of the Legislature. The Province of Newfoundland has also made a commitment to develop both an Action Plan and Conservation Strategy by 1992 (see Table 1-B; p. 25).

2.4.6 North West Territories

The formation of a Round Table for the NWT is not expected until the Fall of 1990, although a chairperson was appointed in March 1990 to comply with the recommendation of the National Task Force. The chairperson has approached the Department of Renewable Resources to establish the terms of reference, and to set up the process whereby Round Table members will be selected. Notwithstanding the above developments, the NWT is already formulating a Sustainable Development Strategy consisting of a sustainable development policy (now before cabinet) and an action plan. The three government ministries co-ordinating this initiative are Economic Development and Tourism; Energy, Mines and Petroleum; and Renewable Resources (Basedo, pers. commun., 26 April, 1990).

FIGURE 7

NEW BRUNSWICK SUSTAINABLE DEVELOPMENT STRATEGY

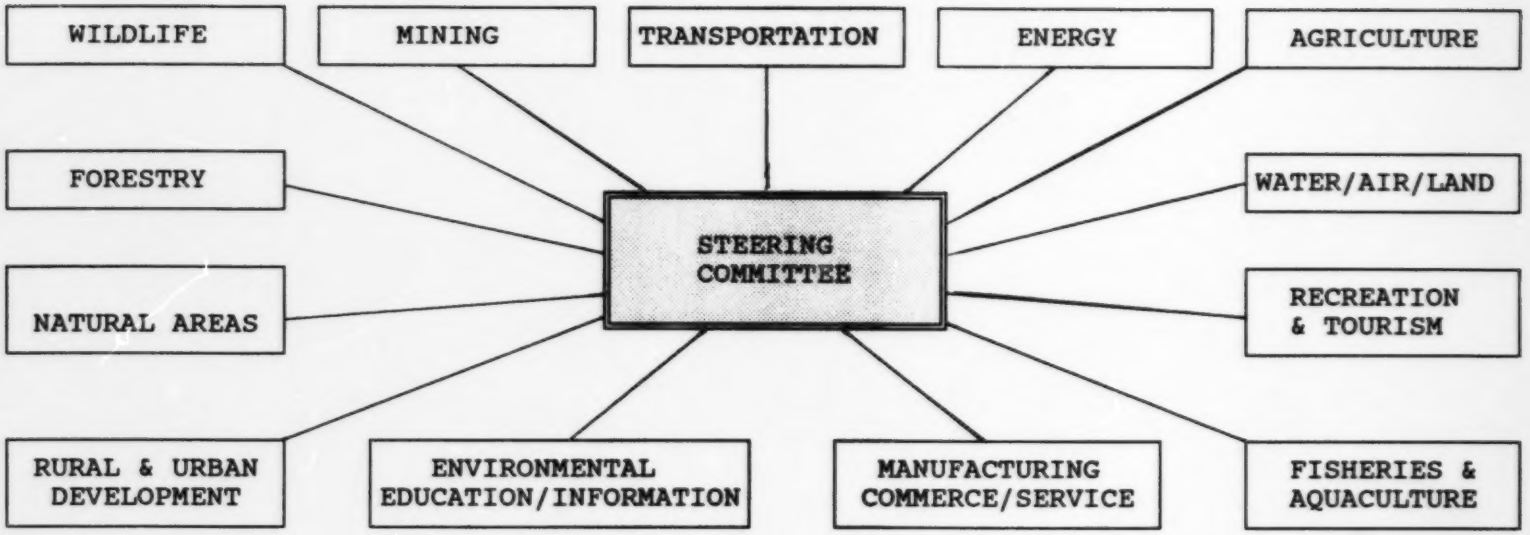
PROCESS CHART

1988 Premier's Round Table on Environment & Economy established. Mandate to prepare Sustainable Development Strategy
November 1989 - January 1990 First round of public consultation to discuss Sustainable Development
February 1990 Sectoral Groups Established
September 1990 Sectoral Reports Prepared
December 1990 Draft Strategy Released Incorporates public input and sectoral reports
March 1991 Second round of Public Consultation for feedback on Draft Strategy
December 1991 Preparation of Sustainable Development Strategy
January 1992 Presentation of Strategy to Premier

Source: New Brunswick. Premier's Round Table on Environment and Economy. Sustainable Development For New Brunswick - An Information Kit, [1989a].

FIGURE 8

SECTORAL GROUPS OF THE NEW BRUNSWICK ROUND TABLE



Source: New Brunswick. Premier's Round Table on Environment and Economy. Sustainable Development For New Brunswick - An Information Kit, [1989a].

2.4.7 Nova Scotia

Nova Scotia's Round Table was formed in October of 1988 "to encourage a new, proactive partnership involving the public and private sectors for the protection and enhancement of the environment" (Connery, 1988, 29). Membership of the Round Table includes four government Ministers and representatives from industry, academia, labour and environmental organizations. The Round Table's mandate is to advise the Premier on environmental-economic issues and to promote sustainable development in Nova Scotia. Other responsibilities which have been assigned to the Round Table include:

a) to co-ordinate the development of a conservation strategy through consultation with other government departments and non-government sectors;

b) to develop a communication strategy which will increase public awareness and understanding of the relationships between the environment and the economy;

c) to liaise with the National and other Provincial Round Tables (Nova Scotia. Department of Environment, 1990, 8);

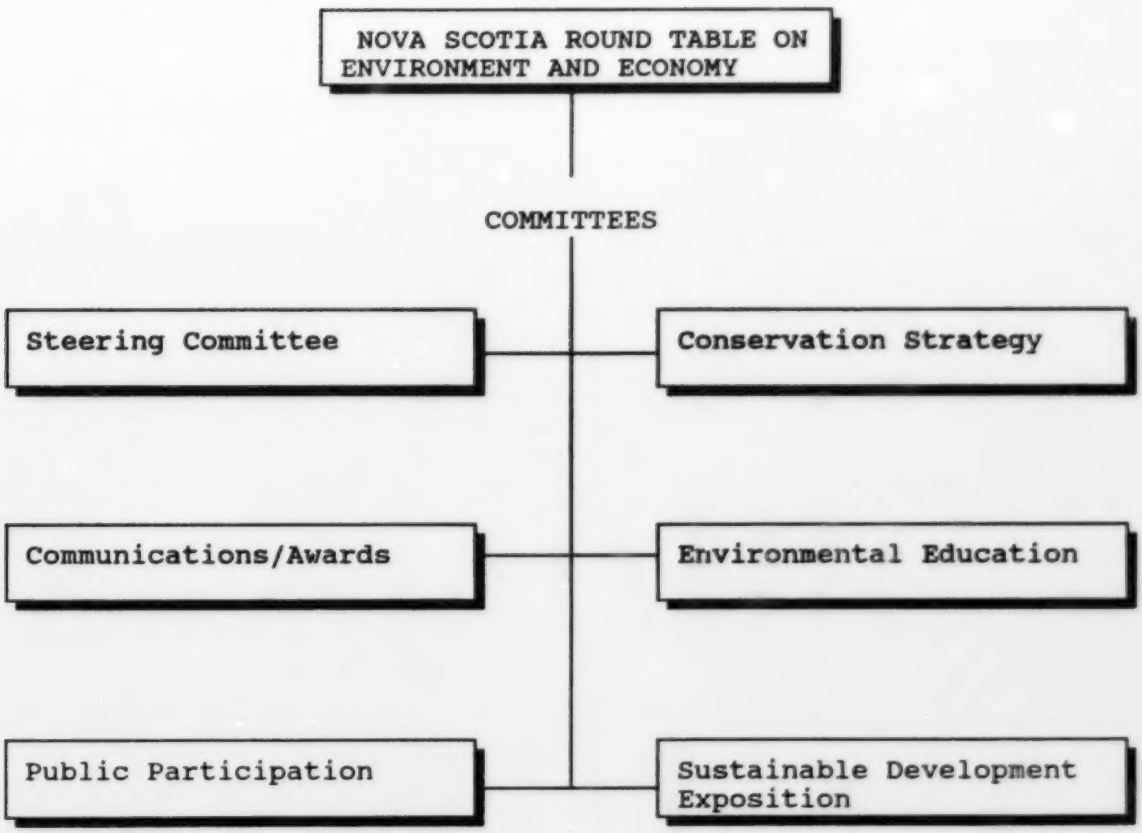
d) to monitor and periodically review the progress made on implementing Nova Scotia's Action Plan.

It should be noted that the province's Action Plan was developed by an Inter-Departmental Committee at the request of the Deputy Minister's Land Use Policy Committee. This document entitled Nova Scotia Action Plan On Environment And Economy: Response to the Recommendation of the National Task Force on Environment and Economy (Nova Scotia. Department of Environment, 1990) was approved by Cabinet in February of this year.

As of March 28, 1990 the Round Table consists of the following six divisions: a Steering Committee, Communications/Awards Committee, Environmental Education Committee, Public Participation Committee, Sustainable Development Exposition Committee, and Conservation Strategy Committee (see Figure 9). The latter has been formed consisting of four out of the nineteen appointed Round Table Committee members, as well as three external individuals. The Committee is currently working with a consulting firm on developing a mission statement which reflects the direction of the provincial conservation strategy (Porter, pers. commun., 26 April 1990).

FIGURE 9

STRUCTURE OF NOVA SCOTIA ROUND TABLE
(Revised March 28, 1990)



Source: Porter, pers. commun., 26 April 1990.

2.4.8 Ontario

Ontario's Round Table On The Environment and Economy was announced by Premier David Peterson on October 6, 1988 in direct response to the 1987 National Task Force Report (Ontario, 6 October 1988, 1). Membership in the Round Table is comprised of twenty-one senior decision-makers, representing industry, academia, government, labour, agriculture and environmental organizations (Sustainable Development, April 1989, 2). Included among the Round Table's Terms of Reference is the ability to

a) "promote appropriate demonstration projects which reflect the principles of sustainable development;

b) promote Outreach Programs to make the citizens of Ontario aware of the principles of sustainable development so that their decisions will be influenced by these principles;

c) to establish a framework and provide guidance and co-ordination for the development of a provincial conservation strategy; and

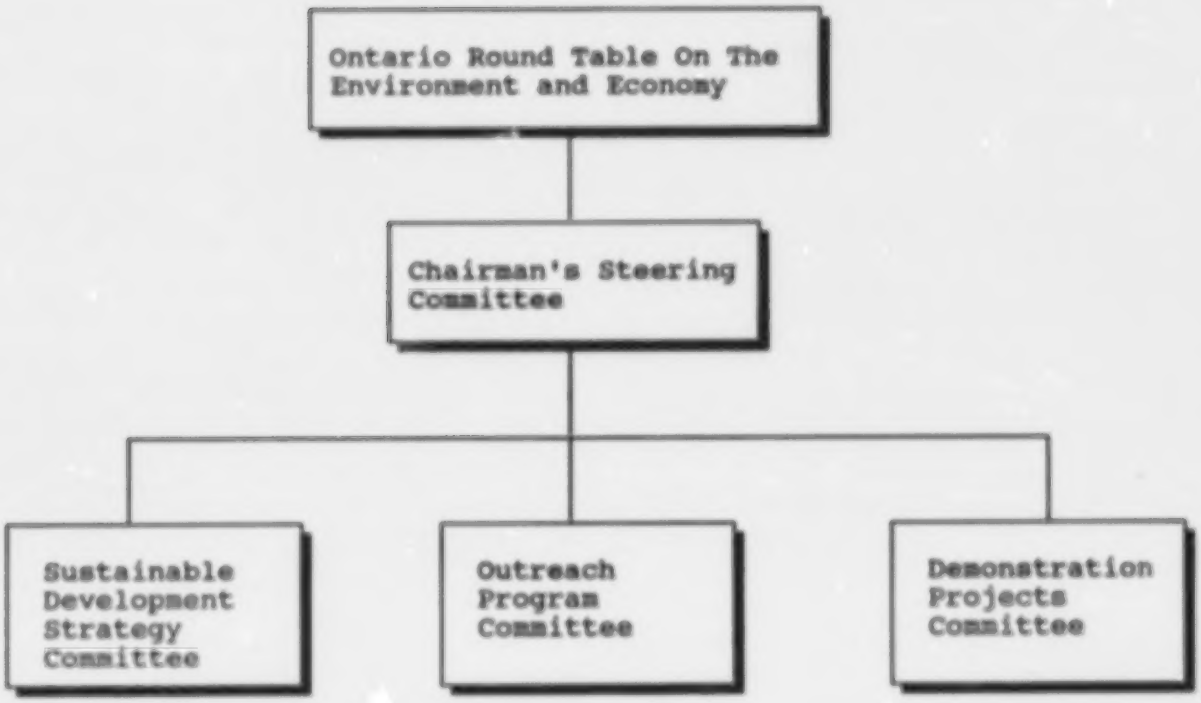
d) commission research in support of the activities of the Round Table" (Ontario Round Table on the Environment and the Economy, March 1990, 16).

In order to fulfil this mandate, the Round Table members were divided into a Sustainable Development Strategy Committee, an Outreach Program Committee, and a Demonstrations Project Committee. According to Arnot (pers. commun., 14 May 1990), research analyst with the Ontario Round Table Secretariat, the Sustainable Development Strategy Committee is intending to establish six working groups which will produce a comprehensive report on the following sectors; agriculture, manufacturing, urban development, energy, forestry, and transportation. A Chairman's Steering Committee was also established to function as a co-ordinating body for the three committees mentioned above (see Figure 10) (Ontario Round Table on the Environment and the Economy, March 1990, 18-19). In lieu of a formal action plan, the Round Table will report to the Premier, as required, on the province's progress toward implementation of the recommendations of the National Task Force. Progress on the four initiatives outlined above are also to be reported to the Premier periodically, with a three-year activities review report slated for April of 1992 (Sustainable Development, April 1990, 2).

Like Alberta, the environmental initiatives of the Ontario Round Table were preceded by the efforts of a non-profit association of major provincial conservation organizations. The Ontario government commissioned The Conservation Council of Ontario in 1985 to gauge the extent to which government programs and policies

FIGURE 10

ONTARIO ROUND TABLE STRUCTURE


Ontario Round Table On The Environment and Economy
Chairman's Steering Committee
Sustainable Development Strategy Committee
Outreach Program Committee
Demonstration Projects Committee

adhered to the objectives of the World Conservation Strategy. A total of six issues of concern were selected for study, including agriculture, forestry, land use conflicts, waste management, and wildlife and natural areas. In order to assess each of these issues, Task Forces with multi-interest memberships were selected from both outside and within the Council itself (Winter, 1987, 65). The report of The Conservation Council, Towards a Conservation Strategy for Ontario (1986), examines each of the six topics with respect to provincial concerns, reviews existing legislation and policy/program initiatives, and makes recommendations. Since this report was released, the Conservation Council has taken it upon themselves to produce a framework for their own provincial sustainable development strategy (The Conservation Council of Ontario, 1989). The Council intends to submit this document to the Round Table upon completion.

2.4.9 Prince Edward Island

Prince Edward Island is to date the only province or territory which has actually implemented a provincial conservation strategy, although this occurred as a response not to the Brundtland Report, but to the earlier World Conservation Strategy program of the United Nations. In 1985, two provincial environmental organizations - Wildlife Federation and Island Nature Trust (an organization which focuses on the preservation of natural areas) began to actively campaign for the "possibility of adapting the World Conservation Strategy to meet provincial needs" and problems in the wake of the upcoming election in April, 1986 (McClellan, 1990, 38). All three provincial political parties were approached by the Wildlife Federation and solicited for their receptiveness and commitment to a Provincial Conservation Strategy. Only the Liberal party, under the leadership of Joseph Ghiz, expressed a willingness to make a formal commitment to the development of a strategy for P.E.I. In June of 1986, the newly elected Liberal government commissioned the formation of a "core" co-ordinating committee to produce a strategy for the province (Prince Edward Island. The Co-ordinating Committee for Conservation, 1987, 2). John McClellan, Executive Director of the Land Use Commission was selected by the government to chair this committee. He in turn was authorized to appoint eight other members on the basis of their enthusiasm and commitment to the task of completing a conservation strategy. This Committee included the Executive Director of Island Nature Trust, President of the P.E.I. Wildlife Federation, 2 academics (biologists), the Provincial Director of Fish and Wildlife, a farmer who was past president of the District Soil and Crop Improvement Association, and a federal employee of the Lands Directorate of Environment Canada (Smith, 1987, 71). In addition, Dr. Douglas Pollard who co-authored Canada's response to the World Commission was seconded to the project from the Canadian Forestry

Service for a period of three months (Prince Edward Island. The Co-ordinating Committee for Conservation, 1987, xix) (see p. 12). The Committee identified and grouped environmental issues into the following five headings: soil degradation and conservation, water and wildlife management, water quality and pollution control, landscape protection and coastal zone management. Working groups were established to further examine each of these environmental issues. Membership consisted of one representative from the core committee, other provincial and federal employees, as well as individuals with an interest in conservation from both the public and private sectors. The mandate of these working groups was to recommend plausible solutions to each problem identified within their jurisdiction (Prince Edward Island. The Co-ordinating Committee for Conservation, 1987, 3).

The aforementioned five environmental working group headings were originally intended to form the sole basis of P.E.I.'s Conservation Strategy. However, McClellan (1990, 40) states that when the Co-ordinating Committee attempted to combine the papers of the various working groups, a conflict arose as to which methodology, the sectoral or cross-sectoral, was most appropriate for the final draft. Several Committee members favoured a sectoral approach, which clearly defined each Department's role (e.g. Wildlife, Forestry) in implementing the province's conservation strategy. As a result, the final document submitted to the Provincial Cabinet in March of 1987 was an amalgamation of both methodologies, which emphasized links between each sector. The single most important theme interwoven throughout all sectors of the entire strategy concerns the problem of soil erosion. The strategy both identifies and discusses the broader ramifications of this problem, from siltation and chemical contamination of streams, estuaries and wetlands detrimental to both aquatic and wildlife habitats, to questionable farming practices and the scheduling of road maintenance projects which leave ground surfaces exposed to spring run-off. The specific sectors of forestry, fish and wildlife will now be examined in detail.

Unlike other provinces, the majority of forested land in Prince Edward Island is under private rather than under public ownership. Since the early 1950's the government has concentrated its efforts on reforestation programs, tree improvement, and foremost a Private Land Forest Management Assistance Program (Prince Edward Island. The Co-ordinating Committee for Conservation, 1987, 15). Several recommendations were highlighted in the strategy:

- the adoption of a Twenty-Year Forest Development Plan for the province, which would be reviewed and be subject to modifications throughout its duration. The following goals are identified: a) to use a co-ordinated approach to sustained yield management (e.g. stand improvement,

increased participation of private lot owners, ensurance of an even distribution of softwood, hardwood and mixed cover); and b) to "encourage the development of provincial self-sufficiency in graded lumber, forest-based energy and other resources" (Prince Edward Island. CCC, 1987, 16).

- enhancement of existing Hedgerow/Shelterbelt Program to provide wildlife habitat and reduce soil and wind erosion (Prince Edward Island. CCC, 1987, 17-18).

- manipulation of species and forest cover to ensure species balance for protection against insect and disease infestations (Prince Edward Island, CCC, 1987, 19).

- incorporation of guidelines for improved wildlife habitat areas into forest management plans (Prince Edward Island. CCC, 1987, 17).

Under the rubric of Fish and Wildlife, the Co-ordinating Committee suggests the establishment of a Conservation Centre, similar in scope to the Fish Habitat Centre already established in New Brunswick. The Centre would be responsible for promoting public awareness on the need for habitat restoration. This task would include identifying and determining methods which would best restore sites for either fish, wildlife or aesthetic reasons. The committee also suggested that demonstration projects illustrating appropriate management techniques for enhancing wildlife habitats should be continued within the Montague Watershed. In addition, the centre would serve as a "storehouse" for information, equipment and supplies (Prince Edward Island. CCC, 1987, 30-33). Other recommendations made by the Committee include:

- allocation of funds for research and monitoring of population and stock changes (Prince Edward Island. CCC, 1987, 34).

- creation of integrated fish and wildlife management plans for all major watershed areas (Prince Edward Island. CCC, 1987, 35).

- development and implementation of a provincial waterfowl management plan (Prince Edward Island. CCC, 1987, 37).

- revision to P.E.I. Environmental Protection Act to conserve, restore, and develop fish habitat. Changes should include: a) the requirement of a permit to make any alterations to a stream or water body and b) that the discharge of effluents into any body of water should meet required water quality standards (Prince Edward Island. CCC, 1987, 39).

- the existing Planning Act for P.E.I. should be amended to ensure future protection of wetlands (Prince Edward Island. CCC, 1987, 40).

- specific wetland areas of international importance to migratory birds, such as the Malpeque Bay, should be designated under the RAMSAR Convention[1] by a joint Canadian federal-provincial agreement (Prince Edward Island. CCC, 1987, 40).

- environmentally sensitive areas (ESA's) or ecological reserves identified by the government need to be protected through legislation (Ecological Reserves Act). The Committee stress that the provincial government must make a commitment to protect these ESA's by allocating manpower and funding (Prince Edward Island. CCC, 1987, 41-42).

To administer the conservation plan, the Committee proposed the appointment of a full-time Provincial Strategy Co-ordinator responsible directly to cabinet. This office was to be abetted by two advisory bodies, the Provincial Conservation Council (to advise on broad environmental issues), and the Water Resources Advisory Council (to advise on surface water policies and to mediate conflicts among user groups). Various governmental departments and agencies, as well as community and volunteer groups, would also provide input. Figure 11 depicts the proposed administrative structure of the P.E.I. Conservation Strategy. In reality, the Co-ordinator position was downgraded to part-time status, on the rationale that a full-time position was unnecessary for a province as small as Prince Edward Island. However, a full-time Assistant Co-ordinator was appointed in September 1988, and a "watchdog" Environmental Advisory Council was established to function as a link between the general public and government (McClellan, 1990, 41).

Prince Edward Island's Co-ordinating Committee produced the provincial conservation strategy despite three main obstacles: an eight month completion date, no full-time staff or secretarial services, and limited funding ($25,000) secured from the Provincial Cabinet and Environment Canada (Smith, 1987). Moreover, McClellan (1990, 40) chairman of the Co-ordinating Committee explains that the province's conservation strategy was intentionally conceived as a "low-key" and "low-profile" project to avoid creating false expectations, such as the negative stigma attached with the PEI Comprehensive Development Plan implemented during the 1970's.

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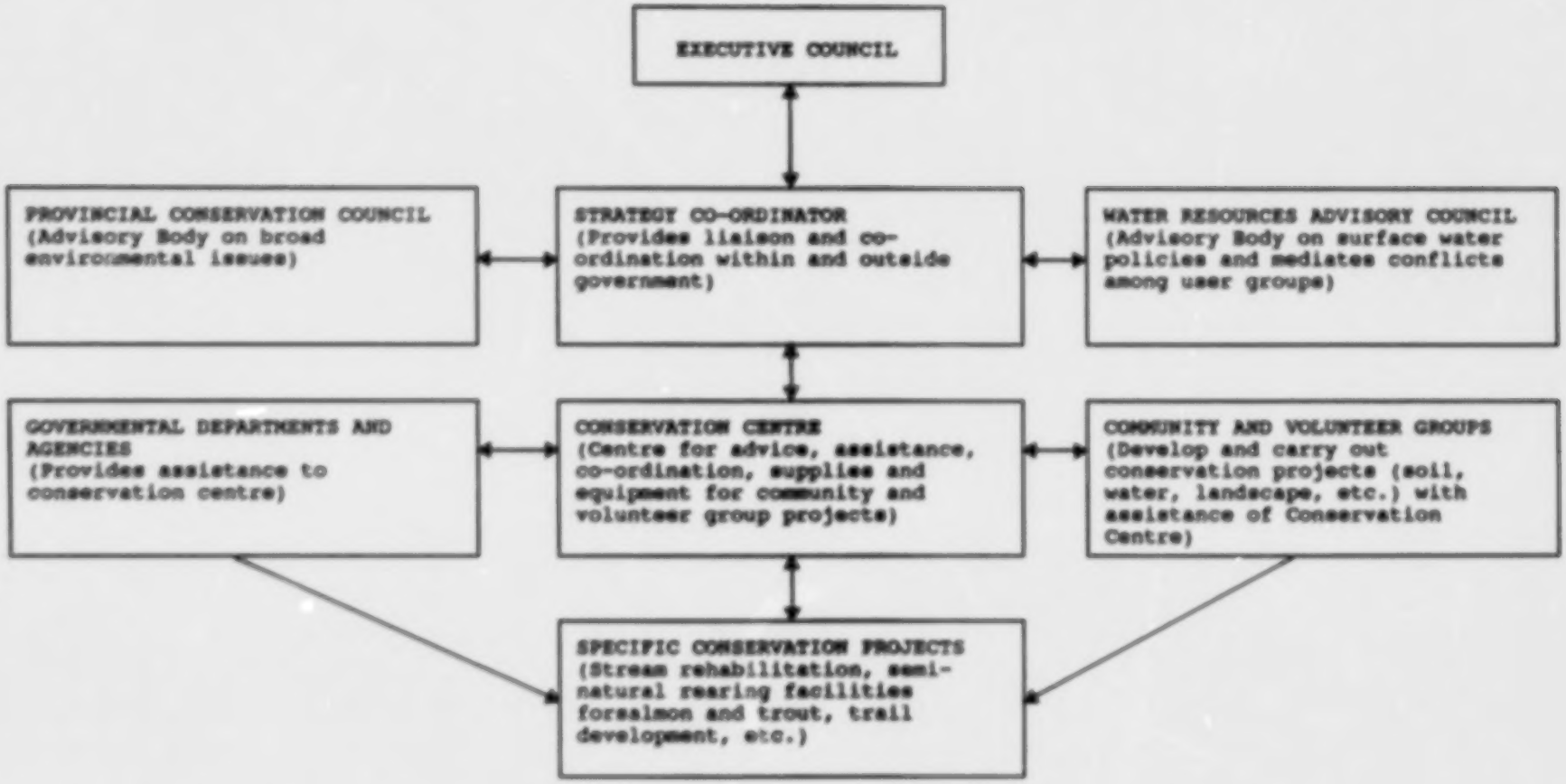
1 In 1971, delegates from 18 nations met at the Convention on Wetlands of International Importance held in Ramsar, Iran. At this historic meeting the delegates advanced the document known as the RAMSAR Convention, which called for the establishment of nature reserves to protect waterfowl habitat. Four years later seven out of the 18 nations signed the RAMSAR Convention making it the first legal document ever to focus on the protection of a specific habitat type (Archibald, 1988, 52-56).

FIGURE 11 - PROPOSED FRAMEWORK FOR PRINCE EDWARD ISLAND CONSERVATION STRATEGY


EXECUTIVE COUNCIL
PROVINCIAL CONSERVATION COUNCIL (Advisory Body on broad environmental issues)
STRATEGY CO-ORDINATOR (Provides liaison and co-ordination within and outside government)
WATER RESOURCES ADVISORY COUNCIL (Advisory Body on surface water policies and mediates conflicts among user groups)
GOVERNMENTAL DEPARTMENTS AND AGENCIES (Provides assistance to conservation centre)
CONSERVATION CENTRE (Centre for advice, assistance, co-ordination, supplies and equipment for community and volunteer group projects)
COMMUNITY AND VOLUNTEER GROUPS (Develop and carry out conservation projects (soil, water, landscape, etc.) with assistance of Conservation Centre)
SPECIFIC CONSERVATION PROJECTS (Stream rehabilitation, semi-natural rearing facilities forsalmon and trout, trail development, etc.)

Source: Prince Edward Island. The Co-ordinating Committee for Conservation. A Conservation Strategy for Prince Edward Island, prepared for Executive Council, Charlottetown: Government of Prince Edward Island, (March 1987), p.vii.

Direct reference to the World Conservation Strategy was also "minimized" to disassociate itself from the idea that a "top-down" model was being imposed on the province from Ottawa, thereby arousing suspicion or scepticism (McClellan, 1990, 40).

2.4.10 Quebec

By announcing the formation of its Round Table on Environment and Economy in August 1988, Quebec was the first province to act on the recommendations of the National Task Force (Sustainable Development, April 1990, 3). The ten-member Round Table consists of representatives from Government, the business sector, academia, and non-governmental organizations such as Greenpeace and l'Union québécoise pour la conservation de la nature (Sustainable Development, April 1989, 2). Like the other provincial Round Tables, this body will advise the Quebec government on environmental and economic matters, and will assist in the formulation of a provincial conservation strategy. An action plan to ensure the publicization, positive enhancement, and implementation of sustainable development initiatives is to be submitted to the Quebec cabinet during 1990. To this end, the Round Table has been consulting representatives from various sectors in the spring of 1990 (Sustainable Development, April 1990, 3).

2.4.11 Saskatchewan

Saskatchewan's Premier Grant Devine announced the formation of the province's Round Table On The Environment and Economy during March of 1989. Membership of the Round Table is comprised of 18 senior decision-makers from industry, government, the Federation of Saskatchewan Indian Nations, academia, interest groups and the general public. The mandate of the Round Table is to "advise the Premier... on the integration of economic and environmental decision-making with the goal of achieving sustainable development in Saskatchewan" (Saskatchewan Round Table On The Environment And The Economy, March 1990a, 14). Other objectives included in the Round Table's Terms of Reference are:

a) to produce a conservation strategy by the end of 1991,

b) to increase public awareness and understanding of the linkages between the environment and the economy by establishing demonstration projects, presenting annual awards for outstanding work, and through education and communication programs (Saskatchewan Round Table On The Environment And The Economy, March 1990a, 14).

In order to facilitate this process, Round Table members were divided into a Round Table Conservation Strategy Committee (RTCSC), Demonstration Projects Committee, and Communication/Education Committee (see Figure 12). The three Committees held their first meetings in early September of 1989.

As the six member RTCSC began to prepare the groundwork for the provincial conservation strategy, the need for a series of advisory groups became evident. Composition of each of the eleven Advisory Groups was determined by the Committee and approved by the Round Table in March of 1990 (see Figures 12 and 13). The appointment of a chairperson and establishment of the sector terms of reference were to be subsequently completed by May 11, 1990, and approval for these sector terms was to be received from RTCSC by May 31, 1990 (Saskatchewan Round Table On The Environment And The Economy, March 1990b, 4). Each of the Advisory Groups is responsible for developing a comprehensive "stand-alone" report by the end of January, 1991, which must be submitted to RTCSC one month later. Advisory Group reports will contain the following information:

a) a brief history of their sector, including participants, organization, present policies and legislation;

b) outline of the economic, environmental, social and cultural significance of their sector, as well as interactions with other areas;

c) analysis of the potential growth and demand for each sector;

d) evaluation of the sustainability of each sector against the criteria presented in (b); and

e) conclusions and recommendations (Saskatchewan Round Table On The Environment And The Economy, March 1990b, 5).

By May/June 1991, all of the advisory committee reports will be amalgamated by the RTCSC to produce the draft provincial conservation strategy. The final version will be submitted to cabinet for approval in November/December 1991.

2.4.12 Yukon

Another jurisdiction well along the path to implementation is the Yukon, whose strategy is currently in print. The Yukon government endorsed the Report of the National Task Force with the release of its own Action Plan in June of 1988. Entitled Response of the Government To The Recommendations Of The National Task Force On Environment And Economy (Yukon. Department of Renewable Resources, June 1988), the document responded to each recommendation of the National Task Force. For example, the 14-member Yukon Council of

FIGURE 12

SASKATCHEWAN ROUND TABLE STRUCTURES

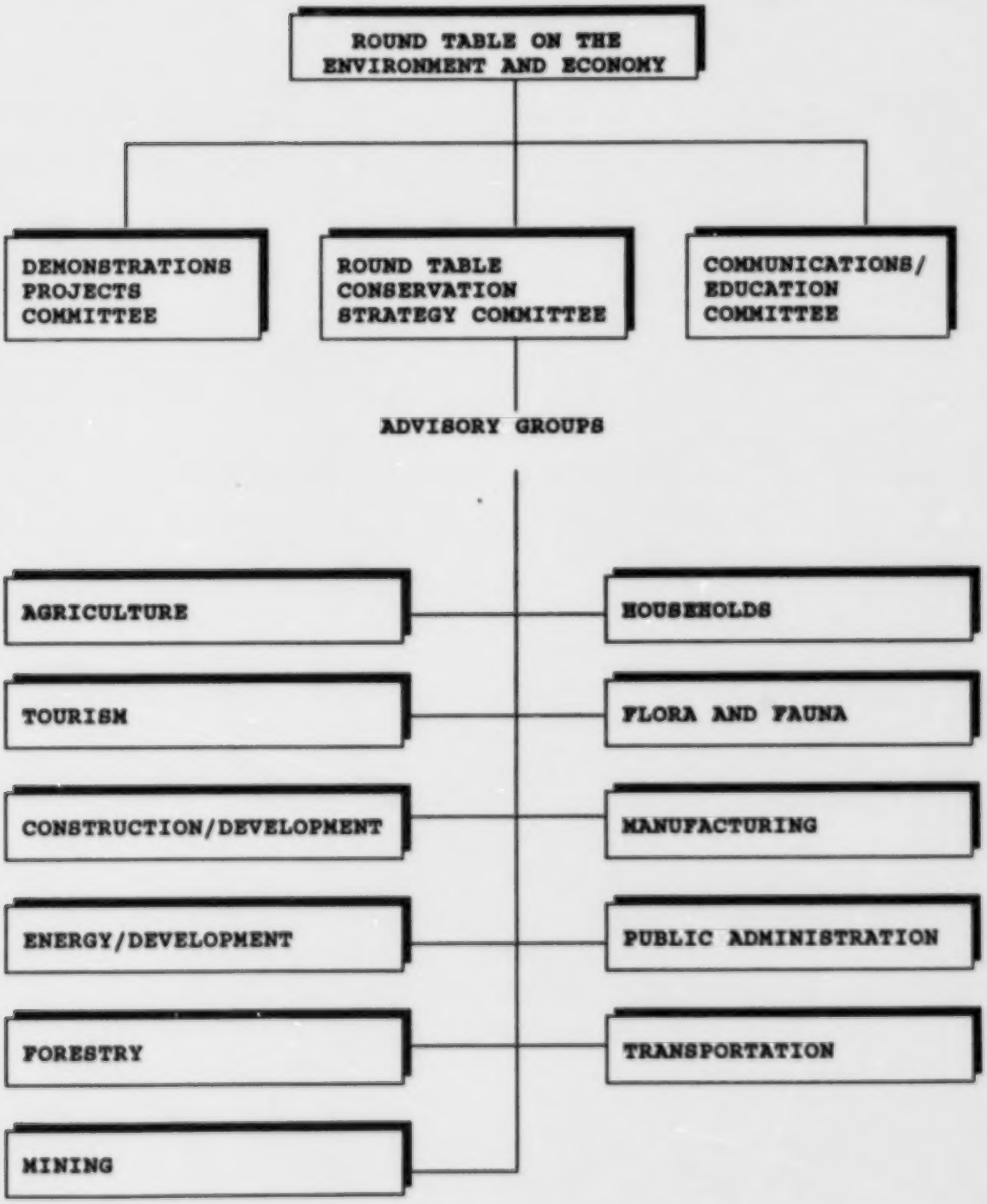


FIGURE 13

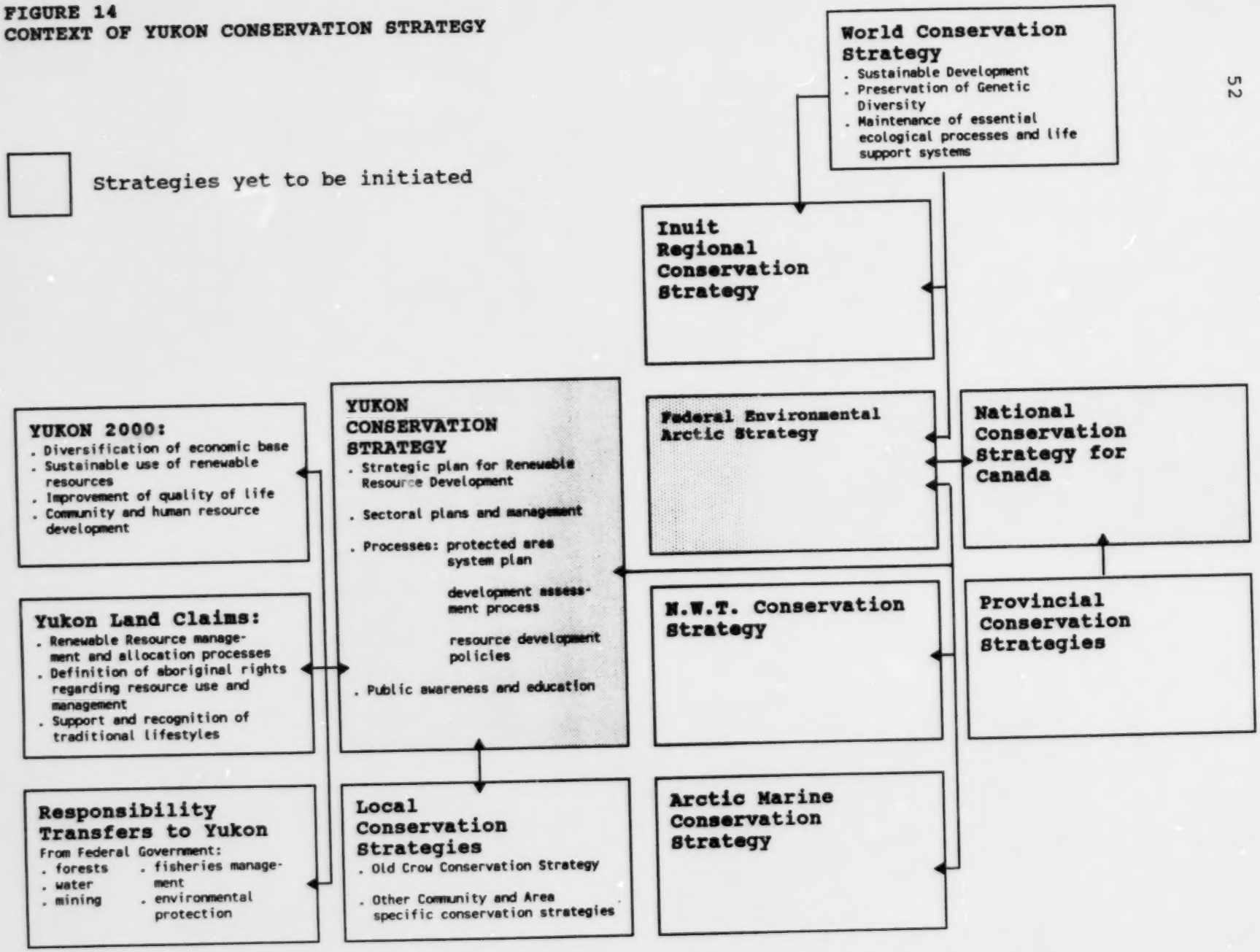
SASKATCHEWAN: A TIME TABLE FOR SUSTAINABLE DEVELOPMENT

Formation of Saskatchewan Round Table On The Environment and Economy	March, 1989
First Meeting of Round Table Conservation Strategy Committee	September, 1989
Formation of 11 Advisory Groups	March, 1990
Selection of Chairperson and Establishment of Terms of Reference For Each Advisory Group	May 11, 1990
Terms of Reference Approved by RTCSC	May 31, 1990
Completion of "Stand-Alone" Reports by Each Sector Advisory Group	January, 1991
"Stand-Alone" Reports Submitted to RTCSC	February, 1991
Draft Conservation Strategy Prepared by RTCSC	May/June, 1991
Submission of Final Version of Provincial Conservation Strategy	November/ December, 1991

Economy and Environment (similar to a Round Table) was established in October of 1989 to encourage environmentally sound economic development. The need for such a body, however, must be questioned in light of the fact that the Yukon had been actively pursuing such a strategy since 1985, and had already done considerable preparation toward a "Yukon Conservation Strategy" (YCS- soon to be released). The roots of the YCS can be traced to the document The Future Of The Yukon's Renewable Resources: A Discussion Paper (commonly referred to as the "Green Paper") prepared by the Department of Renewable Resources in December, 1985. This paper addressed several pressing issues facing the Yukon government at that time. Native Land Claim Settlements, for example, would have entailed the transfer to aboriginal people of additional renewable resource sectors currently under the jurisdiction of the Federal Government, such as forestry, inland fisheries and water. In anticipation of Native Land Claim Settlements, the paper solicited Yukoners' ideas and reactions to present and proposed co-operative management programs in the renewable resource sectors of Big Game, Small Game, Agriculture, Parks and Protected Areas, Wilderness Recreation, Forestry, Fisheries, and Water (Yukon. Department of Renewable Resources, December 1985). The Yukon Legislative Assembly authorized a Select Committee to hold a series of public hearings on the "Green Paper" throughout the Yukon during February and March of 1986. Following 21 public meetings, 48 written submissions, and numerous oral presentations, the Yukon Select Committee On Renewable Resources (December 1986, i) published a Report which reflected the "acceptance by Yukoners of a responsibility to ensure that future generations will continue to enjoy a quality of life which includes a rich wilderness experience".

The Green Paper, which had focused on resource planning activities within the Department of Renewable Resources, was a small but vital component of a larger territory-wide co-operative effort to produce a comprehensive economic development strategy (see Figure 14) (McTiernan and Fuller, 1987, 85). Known as Yukon 2000, the main intent of this public participation-based process was to develop an agenda which would stabilize and diversify the territory's economy by the year 2000 and beyond for all Yukoners (Yukon. Economic Development: Mines and Small Business, September 1986). The Yukon Economic Strategy, released in April, 1988 essentially combined the ideas and recommendations conveyed in the Yukon 2000 exercise (Yukon. Department of Renewable Resources, June 1988, 1).
More formally, the framework for the proposed YCS was prepared by PADATA, a Victoria consulting firm, in the form of a discussion paper for the Department of Renewable Resources (Prescott-Allen, 1987). PADATA viewed the YCS as the renewable resources component of the Yukon 2000 Development Strategy, which could be integrated into the entire public participation process (Prescott-Allen, 1987, ii). On April 6, 1988 the Legislative Assembly of the Yukon

FIGURE 14
CONTEXT OF YUKON CONSERVATION STRATEGY


Strategies yet to be initiated
World Conservation Strategy
. Sustainable Development
. Preservation of Genetic Diversity
. Maintenance of essential ecological processes and life support systems
Inuit Regional Conservation Strategy
YUKON 2000:
. Diversification of economic base
. Sustainable use of renewable resources
. Improvement of quality of life
. Community and human resource development
YUKON CONSERVATION STRATEGY
. Strategic plan for Renewable Resource Development
. Sectoral plans and management
. Processes: protected area system plan
development assessment process
resource development policies
. Public awareness and education
Federal Environmental Arctic Strategy
National Conservation Strategy for Canada
Yukon Land Claims:
. Renewable Resource management and allocation processes
. Definition of aboriginal rights regarding resource use and management
. Support and recognition of traditional lifestyles
N.W.T. Conservation Strategy
Provincial Conservation Strategies
Responsibility Transfers to Yukon
From Federal Government:
. forests
. water
. mining
. fisheries management
. environmental protection
Local Conservation Strategies
. Old Crow Conservation Strategy
. Other Community and Area specific conservation strategies
Arctic Marine Conservation Strategy

officially passed a motion "urging the Government ... to develop a conservation strategy fostering sustainable development" (Sustainable Development, April 1989, 1). In anticipation of this ruling, a Public Working Group was established in July of 1987 to work with the Department of Renewable Resources on developing a YCS (Yukon. Department of Renewable Resources, June 1988, 2). The Public Working Group represented a wide range of Yukoners from various groups, including the Council for Yukon Indians, Outfitters Association, Trappers Association, Federation of Yukon Wilderness Outfitters, Fish and Game Association, Science Institute, Whitehorse Chamber of Commerce, Historical and Museums Association, Curragh Resources, Federation of Labour, Association of Yukon Communities, Ducks Unlimited and Yukon Conservation Society (Sustainable Development, April 1989, 1). A public discussion paper entitled Building A Conservation Strategy For The Yukon was released by the Public Working Group and the Department of Renewable Resources in October, 1988. This paper was intended to stimulate and promote public debate on the proposed content of the YCS. The term "conservation" was defined as the "careful use, protection and management of our natural and human heritage" (Yukon. Public Working Group, 1988, 3). This entails incorporating the ideas and knowledge of two distinct cultures, the aboriginal and non-native, into the territory's conservation strategy. Besides identifying the sustained yield of renewable resources and the need for active integrated resource management (which are two fundamental objectives found in most conservation strategies), the discussion paper also sites the need for:

- "the use and management of the Yukon's resources in a manner that will reduce the "boom and bust" nature of the territory's economy;

- a range of choices for lifestyle;

- equitable distribution to Yukoners of the benefits from resource use;

- greater local autonomy in decision-making related to all aspects of the conservation strategy;

- public involvement, acceptance, respect and understanding of the principles of conservation; and

- appropriate legislative and institutional mechanisms for the conservation of resources" (Yukon. Public Working Group, 1988, 7).

Following the release of discussion paper, members of the Public Working Group approached various organizations, such as chambers of commerce and mining associations, to solicit responses to the proposed content of the YCS (Sustainable Development, April 1989, 4). The territory of the Yukon has completed their Conservation Strategy and it is now in the process of being printed (Moudie, pers. commun., 19 April 1990). Recently, the Yukon has also announced the availability of funding for demonstration projects which exemplify key aspects of the territory's conservation strategy. Grants of $100,000 and $50,000 were made available in August of 1989 for demonstration programs and freshwater fishery projects respectively (Sustainable Development, December 1989, 3).

The Yukon Department of Renewable Resources is concurrently assisting in the preparation and development of several "northern" conservation strategies which involve all political jurisdictions in the Canadian Arctic, and which derive their inspiration from the World Conservation Strategy. The former strategies can be subdivided into federal (i.e. Arctic Marine Conservation Strategy) and Native Conservation Strategies (i.e. Inuit Regional Conservation Strategy). The Arctic Marine Conservation Strategy is sponsored by Fisheries and Oceans Canada in conjunction with the Inuit Circumpolar Conference (see Figure 14). The Strategy focuses on the environment of the Canadian Arctic and purports to "maintain and enhance the quality of the marine environment ... so that the use and development of both non-renewable and renewable resources can be sustained and increased" (Prescott-Allen, 1987, 19). Preparatory work on the Inuit Regional Conservation Strategy (IRCS) under the auspices of the Inuit Circumpolar Conference (ICC) is being conducted by the Yukon Department of Renewable Resources (see Figure 14). The ICC, an international alliance of Canadian, Greenlander, Alaskan, and Russian Inuit, began the process of establishing a sustainable development strategy for their "homeland" in 1985. Their efforts represent the first initiative undertaken by an indigenous people to transcend international boundaries (A.C.S., April 1988, 2). The overall objective of the ICC is to produce a functional "ecosystem-based" conservation strategy (i.e. the IRCS) for the Arctic Region. Several objectives have been identified by the IRCS, including

> "a register of Inuit experts and a database to provide environmental information; designation of protected areas (such as caribou calving grounds); initiation of projects to encourage community-based economic activity through the sustainable use of renewable resources (such as fisheries and the development of markets for byproducts from wildlife hunted for subsistence purposes); and ... education, within and outside Inuit regions, regarding sustainable development in the Arctic" (Sustainable Development, August 1989, 8).

The Federal Government's proposed Green Plan views the Canadian Arctic as a separate and distinct region shared by the Yukon and the Northwest Territories. The ICC is trying to convince the Federal Government to incorporate the Arctic Marine Conservation Strategy as part of the proposed Arctic Environmental Strategy (Gamble, pers. commun., 10 May 1990).

At the other end of the political scale, the Yukon government is actively involved in the preparation of a "local" conservation strategy for the northern Yukon community of Old Crow (see Figure 14). An isolated, traditional settlement of the Vuntat Gwich'in Nation, Old Crow is facing many adjustments and uncertainties associated with the emergent oil and gas industry of the Beaufort Sea rim. The residents of Old Crow view these developments with unease, and there exists a consensus that the best long term option for the community is the continued sustainable harvesting of the region's renewable resource base. To this end, the local Band Council is preparing a renewables-based socioeconomic development plan with assistance from the Yukon Department of Renewable Resources (Fuller and McTiernan, 1987).

2.5 Synopsis of Government Progress In Canada

At the federal level, two major initiatives are being pursued on the basis of recommendations made by the National Task Force in 1987. The National Round Table, established in 1988, has been meeting with provincial round tables in order to discuss common concerns and possible solutions to a range of environmental topics. Secondly, the Green Plan is now entering the phase of workshop consultations, which are intended to provide input into an action plan for Canada's environment to be released in late 1990. Although these two initiatives are obviously related because of their common focus on the environment, there do not appear to be any formal mechanisms for the transfer of ideas from one to the other. This lack of co-ordination and co-operation could be interpreted as a weakness in the federal government's environment strategy. With respect to the provinces and territories, variable progress has been achieved on the three main recommendations of the Task Force. Prince Edward Island and the Yukon appear to have achieved the highest degree of progress, in that both jurisdictions have completed their respective conservation strategies and are attempting to have them implemented. At the other end of the continuum, Newfoundland has yet to form a Round Table or produce a mechanism for designing a provincial conservation strategy. The remaining nine provinces and territories fall somewhere in between these extremes, with British Columbia, Manitoba, New Brunswick, Nova Scotia, Quebec and Saskatchewan all having established Round Tables, and mechanisms for the formulation of conservation

strategies and/or action plans. The North West Territories has no Round Table as of yet, but has produced a sustainable development strategy which is currently before cabinet. Alberta and Ontario appear to have made progress, but this has been achieved by a crown corporation and an association of conservation organizations, respectively; the governments themselves have in fact made little progress on their own.

CONCLUSION

The concept of "sustainable development" suggests that economic growth can best be assured through the maintenance of a viable and healthy environment. With the emergence of a dynamic environmental ethos in recent years, Canadians at all levels are embracing this notion, and are exerting pressure on government to implement appropriate strategies and policies. While delay, disagreement and imperfection inevitably mark the progress of governments toward the goal of sustainable development, people are more aware than ever that our survival as a species depends upon their success.

APPENDIX 1

APPENDIX ONE

LIST OF INDIVIDUALS INTERVIEWED BY PHONE

Information presented in Table One was obtained through personal communication with the following individuals:

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APPENDIX ONE (continued)

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APPENDIX ONE (continued)

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